DOCUMENT RESUME

ED 130 221 CS 002 649

AUTHOR	Causey, Oscar S., Ed.; Kingston, Albert J., Ed.
TITLE	Evaluating College Reading Programs; Yearbook of the Annual Meeting of the Southwest Reading Conference for Colleges and Universities (4th, Texas Christian University, December, 1954).
PUB DATE	Feb 55
NOTE	123p.; National Reading Conference was formerly known as the Southwest Reading Conference; Published by Texas Christian University Press ; For related documents, see ED 123 568-572, CS 002 640, 650, and 652
EDRS PRICE	MF-$0.83 HC-$6.01 Plus Postage.
DESCRIPTORS	*College Programs; College Students; Conference Reports; Higher Education; *Program Evaluation; Reading Diagnosis; Reading Improvement; *Reading Instruction; *Reading Programs; *Reading Research; Reading Skills; Reading Tests; *Teaching Methods
IDENTIFIERS	*National Reading Conference; *Southwest Reading Conference Colleges Universities

ABSTRACT

This yearbook contains the addresses presented at the fourth Annual Southwest Reading Conference for Colleges and Universities. In addition short reports of the special sections and additional materials are included. Part 1 contains addresses which consider the following: standardized reading tests, problems in evaluating college reading programs, the status of research in college reading, an evaluation of selected methods of using reading pacers, trends in college reading programs, reading in relation to listening, speaking, and writing. Part 2 consists of special reports on the administration of college reading programs, diagnostic techniques, progress of students during the training period, and methods and techniques employed in improving ability. An appendix includes a report on college reading programs in the nation, a directory of colleges and universities which offer reading improvement courses, and a list of representatives in attendance at the annual meeting. (LL)

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EVALUATING COLLEGE READING PROGRAMS

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The
FOURTH YEARBOOK
of
The Southwest Reading Conference
for
Colleges and Universities

Edited by
Oscar S. Causey, Texas Christian University
and
Albert J. Kingston, Texas A&M College

Published by
Texas Christian University Press
Fort Worth, Texas
February, 1955

CS002 649

EVALUATING COLLEGE READING PROGRAMS

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Fort Worth, Texas

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Printed By Deering Publications, Burleson, Texas

CONTENTS

Page

PART I — ADDRESSES

Foreword 5

CAUTION REGARDING THE STANDARDIZED
READING TEST — Albert J. Kingston............... 11

PROBLEMS IN EVALUATING COLLEGE READING
PROGRAMS — Roy Somerfeld....................... 17

THE STATUS OF RESEARCH IN COLLEGE
READING — Emery Bliesmer 28

AN EVALUATION OF SELECTED METHODS OF
USING READING PACERS — Clay E. George....... 39

TRENDS IN COLLEGE READING PROGRAMS
George D. Spache.................................. 43

READING IN RELATION TO LISTENING —
Paul Berg 52

READING IN RELATIOIN TO SPEAKING
Mabel S. Noal 61

READING IN RELATION TO WRITING
Rudolph Fiehler 69

PART II

SECTIONAL REPORTS

ORGANIZATION AND ADMINISTRATION OF COLLEGE READING PROGRAMS

PROBLEMS INVOLVED —
Dorothy K. Braken 78

ENLISTING FACULTY AID —
David McAllister 83

RECORDER'S REPORT —
Henry P. Smith 87

DIAIGNOSTIC TECHNIQUES

PROBLEMS INVOLVED —
Dorothy Cantrell 89

RECORDER'S REPORT —
Albert J. Kingston 92

PROGRESS OF STUDENTS DURING THE TRAINING PERIOD

PROBLEMS INVOLVED —
Louie E. Harris 94
RECORD'S REPORT —
Ralph Staiger 98

METHODS AND TECHNIQUES EMPLOYED IN IMPROVING ABILIITY

PROBLEMS INVOLVED —
Oscar S. Causey 101
RECORDER'S REPORT —
George E. Mutch 107

APPENDIX

A REPORT ON COLLEGE READING PROGRAMS IN THE NATION
Oscar S. Causey

A DIRECTORY OF COLLEGES AND UNIVERSITIES IN THE UNITED STATE OFFERING READING IMPROVEMENT COURSES

LIST OF REPRESENTATIVES IN ATTENDANCE AT THE ANNUAL MEETING

FOREWORD

The past decade has witnessed an astounding growth of various types of college and university reading programs. The Annual Southwest Reading Conference for Colleges and Universities has gained increasing recognition as a medium for the discussion of ideas relating to problems of mutual concern. It seems likely that one reason for the success of the conference has been its emphasis on college and adult reading skills. Apparently the conference has served to fill a need which is felt by many who are concerned with reading at the higher educational levels.

The conference is unusual in many other ways. It is not an annual meeting or conventioin of any formal organization or group. There are no membership dues, requirements, or qualifications. Anyone who is interested may participate. The group has no formal charter or constitution and the closest approach to "officers" are the members of the Executive Committee. The main function of the Executive Committee has been the development of each year's program. Their job has been made easy by the willingness of all to participate.

Another interesting feature of the conference has been the diversity in training and viewpoint of its members. Participants represent all sizes and types of institutions. Some represent small community junior colleges or small denominational institutions. They may have student enrollments of less than two or three hundred students. On the other hand, others represent large state or privately endowed universities with enrollments exceeding 15,000. Some participants are employed in departments of English, others in departments of Education, and still others are psychologists assigned to student personnel groups. A few members are in purely administrative positions. In addition to the persons who represent institutions of higher learning, industrial training directors and governmental personnel have participated. The variation in training and interests has resulted in an extremely valuable exchange of ideas and views. All participate freely and all have contributed.

The First Annual Southwest Reading Conference for Colleges and Universities was held on April 25, 1952. The program consisted of six addresses and one panel discussion. The entire program lasted less than six hours and attracted less than fifty persons; largely representing Arkansas, Oklahoma, and Texas. In contrast, the fourth annual meeting attracted approximately twice that number and drew participants from Florida, Utah and the District of Columbia. In fact, one tried-and true Texan was heard to exclaim that the Southwest, if one were to judge by those attending the Reading Conference, was growing almost as large as the state of Texas itself. In a more serious vein, however, it should be emphasized that all who are interested in college and adult reading always are welcomed to participate. There are no geographical restrictions or limits.

As mentioned above, one of the major objectives of the Southwest Reading Conference for Colleges and Universities has been the mutual exchange of current thinking. Previous conferences have grappled with such topics as DEVELOPING A READING PROGRAM FOR COLLEGE STUDENTS, IMPROVING READING PROGRAMS FOR COLLEGE STUDENTS AND ADULTS, and WHAT COLLEGES ARE DOING IN READING IMPROVEMENT PROGRAMS. Most of the ideas which were presented at the meetings have been published in previous yearbooks. This year the conference turned its attention to another important and troublesome topic, EVALUATING COLLEGE READING PROGRAMS. As one would expect, the topic was by no means exhausted, nor were ready and concise solutions discovered. In fact, most of the participants left the conference feeling that the surface of the topic had only been scratched. In one way, this sense of dissatisfaction is one of the most beneficial things which can be carried away from any meeting. Almost all who attended left the conference thinking about and analyzing their own particular methods of evaluation.

As usual, this yearbook contains all of the special addresses which were presented to the 1954 conference. In addition, short reports of the special sections are included. Certain additional materials which the editors felt is of general interest, also has been incorporated.

The editors wish to thank all who made this yearbook possible. Special recogition should be made of the cooperation of the speakers and recorders whose reports follow. Thanks are due to the members of the Executive Committee and to all who participated for their enthusiastic cooperation.

Oscar S. Causey
Albert J. Kingston

January 19, 1955

PART I

ADDRESSES

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CAUTIONS REGARDING THE STANDARDIZED READING TEST

Albert J. Kingston

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Standardized reading tests usually are classified into two general types: the survey test, which presumes to furnish information about an individual's general level of reading ability, and the diagnostic test, which is designed to reveal specific areas of weakness. Although many of the factors discussed in this paper are equally pertinent and applicable to the diagnostic reading test, major emphasis has been directed toward the reading survey test.

One of the most fundamental of the difficulties which plague the reading teacher or specialist is the appraisal of reading skills. Most of us who function at the college level rely in part, at least, upon standardized tests to assist us in the selection of our students or in evaluating the results of our training. The validity and reliability of our testing devices is of major importance to us. The purpose of this paper is merely to review some of the weaknesses of standardized tests which affect their validity and reliability.

Over thirty years ago such authorities as Pressey and Pressey (9) and Gates (5) pointed out grave weaknesses in the reading tests which were being employed at that time. In the 1930's critical studies by Eurich (4), Shank (13), Tinker (15), Robinson and McCollom (11), Bloom, Douglas, and Rudd (1), and Seashore, Strackford and Swartz (12) pointed out the shortcomings of reading tests and testing. During the forties Tinker (16) continued his critical work and Robinson collaborated with the Halls (6,10) in contributing several valuable studies. Several other investigators such as Langsam (7) and Bloomers and Lindquist (2) attacked the problem of evaluating reading ability. The results of these investigations indicated a general lack of validity in the measurement of reading skills.

One may wonder why the appraisal of reading ability should be inadequate with the emphasis which is placed upon reading at all levels of our educational programs. Perhaps one of the most fundamental factors stems from the lack of agreement regarding the nature of the reading process itself. It would be interesting, if time permitted, to ask this group of reading specialists assembled here to write their definition or their description of the reading process and to list those skills which they feel are of paramount importance. I dare say that we would discover considerable differences of opinion. At any rate, this topic might be worthy of discussion to a future meeting of this conference. In their widely read text McCullough, Strang and Traxler (8) list seven different viewpoints regarding the nature of reading. The authors of standardized tests have reflected this lack of common agreement regarding the nature of reading for well over thirty years. Many tests on the market today measure only these particular skills which the authors believe are most important. One cannot but agree with Cronbach's statement that "no area illustrates more clearly than reading that tests having the same name measure quite different behaviors" (3, p. 287).

In order to narrow the problem let us examine the common assumptions of standardized testing. Fundamentally we must recognize that a test is nothing more than a standardized sample of an individual's behavior. We assume, of course, that by observing this sample of behavior we will be able to make valid inferences about an individual. Thus, when appraising an individual's reading skills we attempt to sample those aspects of his reading abilities which enable us to gain insight into his over-all reading achievements. It should be obvious that the success of such a procedure will be dependent upon the degree to which those skills which we sample are representative of over-all reading achievement. If we cannot agree upon which skills are most essential in reading, we cannot agree upon the measurement of reading.

One might inquire regarding the responsibility of reading specialists and reading teachers for this predicament. As users of standardized tests, are we not responsible for some of their shortcomings? Not only do we continue to purchase and utilize tests of dubious validity, but we also insist on instruments which presume to measure factors of doubtful validity. For example, almost all of the reading survey tests now on the market furnish a rate or speed score and a comprehension score. How valid is a rate or a comprehension score? As reading teachers we realize that one's rate or speed of reading is determined by several factors including the purpose and set of the reader as well as the nature and difficulty of the material which is presented. Robinson and Hall(10) experimentally verified something which teachers of reading have recognized —that one's reading rate varies considerably when one reads a fairly long passage. Although we recognize that a "rate score" derived from two, three or five minutes of reading is not likely to be stable or to typify all of a student's reading speed, we continue to insist upon instrument which furnish such a score.

Another factor which is presumed to be measured by standardized survey tests is reading comprehension. In most of the tests now being marketed the comprehension score is treated as something which is separate from the rate of speed score. In his excellent criticism of reading testing, Stroud decries this practice. "By any intelligent construction of the term, rate of reading means the rate at which a persons reads with understanding. No one is seriously interested, except for experimental purpose, in ascertaining that rate at which isolated words may be perceived. Rate of reading, then, really means rate of comprehension" (14). As college teachers we must agree with this viewpoint. Again it should be emphasized that comprehension is not a clearly defined, unitary factor. Some test authors seem to feel that mere recognition of something which has been read is a suitable check on comprehension. Others limit their checks to the recall of information or isolated facts. These authors seem to equate comprehension with memory. A few writers attempt to evaluate such higher mental processes as understanding various principles, seeing the implications of complex data and the applying what has been read. Certainly the appraisal of these factors is of paramount importance to those of us who teach college students.

The validity of any comprehension score also is affected, of course, by the nature and difficulty of the material which is employed in the test. Rate of reading and degree of comprehension vary according to the content of the passages which are presented. Some individuals read history faster than they read stories or essays, some do not. The subject matter content as well as the level of difficulty of the sample will serve to depress some students' scores while elevating others. Many reading tests also fail to present systematically designed material which possesses a known level of difficulty. Extremely easy reading passages sometimes are sandwiched between two very difficult selections. Often each selection receives identical weighing in scoring. The small sampling of subject matter content and difficulty level results in the evaluation of a limited number of reading skills. The value of these measures, of course, is largely determined by the degree to which these skills coincide with the ones in which we are interested. Those of us who function at the college level indeed may ponder the value of these measurements.

Most of the reading survey tests which are available have been designed for use with rather diverse educational and chronological age groups. The Survey Test of the Diagnostic Reading Tests, for example, includes seventh graders through college freshmen. The Nelson-Denny Reading Test ranges from high school senior to college senior. The Advanced Form of the Iowa Silent Reading Test includes both high school and college groups. The SRA Reading Record is designed for grades eight through thirteen and the Kelley-Greene Reading Comprehension Test includes grades nine through thirteen. The most modest range seems to be that of the Cooperative Test Service, Test C; Reading Comprehension. It offers a lower level test for grades seven through twelve and a higher form for superior eleventh and twelth grade students and for college groups.

We must recognize that tests designed for use with such diverse educational levels as junior high school to college freshmen encompass students with great differences in physical, mental and emotional maturity. Do students' reading skills develop so slowly that a single instrument can be used to measure them effectively from junior high school through their first year in colege? An affirmative answer must be made according to the assumptions of the test constructors. It is possible, however, that this assumption is erroneous, and that the wide range of our reading tests may be due to their failure to differentiate in a more refined and precise manner. Would we not wonder about the validity of an appraisal of other types of educational skills and achievements, if the instruments which were employed encompassed so wide a range? It seems likely that much of the evaluation and research which we undertake at the college and university level is adversely affected by the fact that on many of the most commonly employed tests the college freshmen group represents the highest extreme of the range. This condition results in an extremely "low ceiling" which prevents valuable evaluation. For example the proper follow-up testing of students who participate in reading programs as freshmen is affected by this condition. The "low ceiling" also prevents an adequate comparison of the higher level reading skills of superior and inferior college readers.

In this review an attempt has been made to describe some of the more obvious shortcomings of standardized reading tests. It is unlikely that anything new has been presented. It is believed, however, that it is advantageous for us to review periodically those instruments which we employ in our work. In that way we will always be aware of their weaknesses. I, also, believe that this topic is a fitting one on which to begin our conference on evaluation, for one group of reading specialists has declared, "One of the chief reasons why reading procedures are so seldom evaluated and why reading performance is not more often and more carefully analyzed is the scarcity of reliable and valid instruments on which to base judgments" (17). The weaknesses of standardized reading tests have many implications for us as individuals and as a group.

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PROBLEMS IN EVALUATING COLLEGE READING PROGRAMS

Roy E. Summerfeld

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First, let me say that I was very happy to hear that it was decided that the general theme for our conference this year would be "Evaluating College Reading Programs." To many of us here this is not a new topic; we have been concerned with the problem for sometime and have had several discussions about it. Conseqently, some of the things which I have to say this morning will not be new to you. However, for the sake of re-emphasis and for the consideration of those who are newer in the field, I will attempt to define and describe the aspects of the problem as they appear to me.

The need for a critical examination and objective evaluation of reading programs at the college level was brought home to the writer rather abruptly some time ago while attending a symposium on another topic at another campus. In an informal discussion a person who had been involved in the reading program at that institution said that he had given up his connections with the reading clinic. He no longer wished to be associated with a program which might be sailing under false colors or, as he put it, taking money under false pretenses. In short, he was not convinced that the program had any worthwhile long-range effects. Now, it may be that he was unduly pessimistic, but the fact remains that there was then, and is even now, little or no objective evidence which could be used to convince him, or others critical of the program, to the contrary.

There are others on various college campuses who look with questioning—if not antagonism—toward student service programs in general and reading improvement programs in particular. These people seem to have the attitude that college students should have learned to read before they get to the campus and if the students don't know how to read effectively, they have no business being in college. These same critics have a similar attitude toward other clinical services; that is, if the student is emotionally disturbed to the point of needing the services of a clinical psychologist or psychiatrist, said student is sick and if he is sick he does not belong in college. It may be that these criticisms are motivated by selfish interests; that is, the critics look with disfavor on any project which would take financial support that might otherwise go into salary increases. Short-sighted as this may seem, the fact remains that some of us have this type of opposition.

With this consideration, then, it may be that we have the problem of selling our program. But if we are to sell the program, we must know what we are selling. In this regard, also, we must be wary of over-selling — overemphasis — and of misrepresenting the product.

There is the fear that reading programs at the college and adult levels may be entering — if not already in — a situation which might be likened to a fad stage. This phenomenon is not new in education. The so-called "progressive" education movement may be cited as an unfortunate example. The concepts and proposals of the early thinkers in this movement certainly had much to offer for the improvement of educational practices. However, through over emphasis and misinterpretations by disciples who "went overboard," the entire movement fell into disrepute.

Perhaps a more applicable example would be the "guidance" movement. A few years ago "guidance" was in a situation somewhat analagous to the situation in which reading improvement programs find themselves at the present time. At that time "guidance" programs were the vogue. Many high school principals felt they had to have a guidance program and proceeded to set up something or other without much investigation or planning. In one school, for instance, the principal was very proud of his program. The program consisted of one teacher who stayed after school one afternoon each month to talk with any seniors who wanted to discuss the problem of which college to attend. That was his "guidance" program for the entire school.

Extra-curricular activities may also be cited. The feeling is that these extra-curricular (or co-curricular) activities are good, so now in some schools we have forced participation in these activities.

This is not to deny that the above-mentioned programs are important. They are very important. But they must be kept in proper perspective — they must be fitted into the proper place in the total school program.

The concern here is that reading improvement programs do not become — if they are not already so — a victim of this "band-wagon" phenomenon. A rather large high school may be cited as a case in point. Someone "sold" the principal. He sent one of his teachers to a two-week summer workshop and spent considerable money for gadgets and other equipment. He then had a "reading specialist" and a "remedial reading" program. The "program" operated for about two years. The teacher now has a full-time teaching assignment exclusive of the reading program and the equipment has been lying unused for some time. As another example, at a large midwestern university it was decided they should have a reading program for the students. A "specialist" was hired and his first action was to purchase several thousand dollars worth of gadgets.

Concern is also expressed about the rash of articles appearing in the current, popular periodicals. The layman reads, and is influenced by, this popular literature, much of which, widely disseminated, is not psychologically sound. The increasing demand for reading programs coming from business and industrial concerns raises further questions. In view of this apparent snow-balling of interest we need to be more and more sure of our ground. We face the need of continuing research which will lead to new knowledge not only for our own security and peace of mind but also to help the laymen evaluate programs now in effect and projected so as to be critical of programs which are not psychlogically sound.

Probably foremost of the criticisms leveled at reading improvement programs is concerned with what might be called the "buckshot" approach. Those individuals who are working in situations where they have staff and time for individual diagnosis and selective treatment are not subject to this criticism. However, it seems that many are not in such a favorable position. As a consequence, all too often in remedial work, methods and gadgets are employed that concern themselves primarily with manifestations of reading disability rather than with amelioration of causal factors. There is a variety of causes for slow reading, and the name "remedial" presupposes "diagnosis" and specific training. However, from reports in the literature it would seem that in most instances, the same mechanical treatment is given to all cases. In fact, at some colleges, all students whose reading levels fall below a certain percentile on freshman admission tests are required to attend "remedial" courses which apply the same techniques to all without regard to the types of learning abilities or reading disabilities.

This brings to mind some of the stories concerning "medics" of World War II. For any GI who came into a dispensary the prescription was always "aspirin" regardless of the ailment or complaint.

A further criticism which has already been mentioned is that we have no objective evidence of any worth-while long-term effects.

One of the first essential principles in evaluation is that we must have a definite purpose for the evaluation. Justifying and/or selling the program certainly could be considered as a worthwhile purpose. However, it is here submitted that one of the main purposes in evaluation should be the improvement of instruction.

With the purpose of evaluation established the next major principle is that evaluation must be done in terms of objectives. This obviously implies that we must have specific goals toward which we are working and that we must evaluate in terms of the achievement of these goals. Here we get into the specific problem of defining objectives of instructions.

In this regard, while discussing the possibility of setting up a reading improvement program for an oil company in the vicinity of our campus, the company representative raised the question of whether or not we could furnish certificates to the particular individuals at the completion of the course or whether a letter could be sent to the company indicating the names of the individuals who had completed the course. It is a rather common practice in adult education courses involving business and industrial personnel to furnish certificates indicating satisfactory completion of a course in "Time and Motion Study," "Human Relations in Industry," "The Role of the Supervisor in Industry," or whatever the course may have been.

The question is: What constitutes "satisfactory completion" of a reading improvement program? This question is also pertinent to those who are teaching credit courses and thus must assign grades for the class performances. What standards must be met for the assignment of a particular letter grade? Is attendance considered? Is the attendance of a certain percentage of the training sessions all that is required? Or must there be demonstrated improvement? Must there be a certain improvement in terms of words per minute or comprehension scores, or must the improvement be in terms of a certain percentage of increase over beginning rate and beginning comprehension score? If in terms of percentage of increase, what percentage is required? Studies have indicated that increases of 50 per cent to 200 per cent or more are possible. In one instance where the instructor established a 50 per cent increase as the goal, the students tended to improve 50 per cent. If the instructor set a 100 per cent increase as the goal, the students tended to reach that objective.

Another question in working with groups is whether the emphasis should be on increasing speed without sacrificing comprehensioin or whether the attempt should be made to improve both rate and comprehension. Reports seem to indicate that the former is more popular. As Gray (5) summarizes, ". . . it is either easier to secure improvement in speed of reading or the techniques for improving speed are better developed or more easily administered than those for improving comprehension."

Further, should improvement be measured in terms of rate and comprehension on reading passages approximating normal reading materials or in terms of standardized tests? The question has often been raised as to whether we are actually improving reading ability, or whether we are merely improving reading-test performance with no meaningful transfer of the acquired skills to the academic situation.

There are some who hold academic performance is the only legitimate criterion for judging the effectiveness of college reading programs. If this be true, the usefulness of such programs is open to question. According to Robinson (12), ". . . a review of nearly one hundred studies . . . uncovers less than a dozen references to the effect of reading programs upon scholastic improvement. Of these, only one study using control groups reports **apparently** significant gains in terms of academic grades for reading classes. Other investigators either report no significant improvement in academic standing as the result of remedial instruction, or without definitive findings take the hopeful and confident stand that reading instruction can improve academic work."

Admittedly, the demonstration of increased academic effectiveness as a result of group instruction is not easy to arrange and under certain circumstances is well-nigh impossible. But if the hope, or the objective, of the instruction is to bring about an improvement in academic performance, reading programs must be evaluated in those terms.

A further question in this regard arises from those studies investigating the relationship between reading test scores and academic achievement. One investigator (8) found positive, but not statistically significant, correlations between rate and paragraph comprehension scores and average final grade. These results support the findings of an earlier investigation at Dartmouth College (7). Should it be concluded, then, that academic performance seldom is increased by improvement in rate? Not necessarily. It might be that these results are influenced by the types of measurements used and by the courses involved. Humber (6), for instance, found that reading scores were related to final grades of courses in the Humanities but that these scores were not related to grades for courses in the Sciences. This raises the question as to whether or not reading test scores are valid measurements of the complexity of reading skills which a college student needs for successful academic achievement.

This question also must be kept before us: Are we primarily interested in immediate results or in the long-range effects? If our concern is for immediate results then we can be satisfied with evaluations during, and at the termination of, the training course. However, if the major concern is for the permanence of the improvement, then more emphasis on follow-up studies is needed. And it must be admitted that data from the latter type of investigation are much more difficult to obtain; but, to reiterate, evaluation must be done in terms of objectives.

There may be some who feel that a part of our job should be to foster positive attitudes toward reading — that we should be able to introduce students to a greater enjoyment of reading as a leisure time activity. In this instance, our criterion would need to be the amount of free reading the student does in his spare moments.

Thus, the evaluation of teaching techniques, materials, manuals, claims for — or criticisms of — mechanical gadgets must be done in the light of whether or not they contribute to the attainment of the objectives we set out to achieve.

After the criteria have been established in terms of the objectives, the next step in evaluation is selecting measuring devices and/or procedures to test for the achievement of these goals and the administering of the tests. Obviously, the evaluating technique must be appropriate to the objective investigated. The problem of the appropriateness of standardized tests has been raised earlier in this paper and has been discussed in some detail by Kingston in a preceding paper.* For the present purposes it would seem sufficient to raise the question as to whether reading tests measure the sort of thing we are trying to improve? This is a pertinent question since those studies which have used control groups indicate that these groups show considerable and significant improvement in test performance — though not as great as the remedial or trained group. In our own experience on our campus it was found that the increase in standardized test performance was not related to the increases in rate as measured by informal devices. This problem is further complicated by the fact that it has been demonstrated that significant gains in reading test scores can be brought about merely through a period of instruction on how to take tests. Dolch (4) summarizes quite adequately, "Present reading tests measure a mixture of factors in reading and . . . these tests are done by the children using a mixture of reading abilities and study abilities. Practically, one may say that these tests are all we have and that they must therefore be used, but with caution."

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*Editor's Note: See Kingston, Albert J., "Cautions Regarding the Standardized Reading Test."

The student questionnaire approach to evaluation, as described by Kingston (9), is worthy of consideration. Granting all of the weaknesses and difficulties inherent in questionnaire studies, it must be admitted that the consumer has a right to express himself concerning the commodity, it might well be that an analysis of the student's reactions to the program could lead to clues regarding areas of possible improvement.

It is in the design of the study, in the treatment of the data, and in the interpretation of the results that many reports on investigations of the effectiveness of reading programs are open to wildest criticism. Most studies suffer from somewhat inadequate experimental design, particularly with respect to controls. In fact, Murphy and Davis (11) provide evidence "that all studies reporting gains as a result of remedial work should be regarded skeptically since common methodological errors lead to false indications of progress. Tests used in measuring progress should be corrected for chance success and scores should be corrected for regression to the population mean whenever the remedial group is selected because of low test scores." Many studies involving remedial groups fail to take this regression phenomenon into account. A simplified statement of the regression phenomenon might be that in a test-retest situation those people who score at the extremes of a distribution on the first test tend to score closer to the mean of the distribution on the second test; that is, the scores tend to regress toward the mean. One way to correct for this effect is through statistical techniques. Another more popular way is through the use of control groups. The importance of control is illustrated by one of Webber's (14) studies, in which he found that the control group without training gained two-thirds as much as did the experimental group with training.

The bulk of the studies using academic grades as a criterion seem to assume that the requirements of experimental control are satisfied if performance on initial intelligence tests and initial reading tests are held constant between the control group and the group which is to receive the training. No attention is given to such important factors as attitudes and motivation. Adequate experimental design demands that, with the exception of the technique being investigated, all factors which might influence reading performance be held constant.

Since reports of a number of reading programs express progress in terms of increases in percentile rank or in terms of percentage of gain, a word of caution regarding the use of such scores may be in order. Certain limitations must be kept in mind when using percentiles. In a normal group scores tend to cluster about the mean of the distribution. Consequently, the range of values of the scores between the 50th and 55th percentiles is much less than the range of value table of norms a raw score of 74 is at the 45th percentile. Increasing this score 5 points places the resulting raw score of 79 at the 70th percentile, an increase of 25 percentile points. On the same table of norms a raw score of 85 is at the 85th percentile. Increasing this score 5 points places the resulting score of 90 at the 93 percentile or an increase of only 8 percentile points.

Pursuing this misleading analysis still further, in the first case above the increase of 5 points in raw score which brought about an increase of 25 percentile points — from the 45th to the 70th percentile — actually represents an increase of 55.55 per cent in precentile rank. In the second case, the increase of 5 points in raw score which brought about an increase of 8 percentile points actually represents an increase of 9.4 per cent in percentile rank.

The use of percentile scores is further complicated by the fact that those individuals who score in the upper percentiles are limited in the amount of improvement they can show. That is, it is impossible for a person who scores at the 97th percentile to show an increase of more than 2 or 3 percentile points. And, of course, those who score lower have much more of an opportunity to show a large gain.

The misconceptions which can arise from reporting increases in terms of percentage of gain — which was implied in an earlier paragraph — is further evidenced by the fact that a gain of 150 words per minute in rate represents a 100 per cent increase for a person beginning at 150 words per minute while the same gain of 150 words per minute represents a 50 per cent increase in rate for a person beginning at 300 words per minute — or a 30 per cent increase for a person who begins at 500 words per minute. Thus it becomes quite obvious that using these types of data might readily lead to erroneous conclusions.

The purpose of the foregoing discussion is not primarily to discourage the use of the types of scores discussed but rather to bring about an awareness of their limitations.

Unfortunately, there are some investigators who, perhaps carried away by their own enthusiasm, yield to the temptation of stating conclusions and drawing implications which are not justified by the findings of the study. In interpreting the results of any investigation, care must be exercised so that the conclusions drawn necessarily and unequivocably conform to evidence presented. Caution must be used to prevent overgeneralizing and the drawing of inferences which are not supported by the data.

Summarizing, then, in evaluating our programs we must begin with clearly defined objectives in mind; the next step is the judicious selection of evaluating techniques for obtaining the data as to the achievement of the objectives; these techniques must then be used within the framework of an adequate experimental design; the data collected must be treated with statistically sound techniques; and the conclusions and inferences drawn must be based on objective evidence rather than on wishful thinking.

It is recognized that controlling research conditions, equating experimental and control groups, selecting and using valid criteria are difficult tasks. They are not insuperable, however, and they must be handled more skillfully if reading research is to show much improvement in quality — if our evaluation is to achieve scientific stature.

Groups such as represented by this conference must exercise leadership and responsibility in finding the solutions to these problems, unless, like the proverbial ostrich, we wish to dig our heads in the sands of complacency and let the winds blow as they may.

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THE STATUS OF RESEARCH IN COLLEGE READING

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This paper differs somewhat from the reports relative to research in reading at the college level that were presented at the last two conferences (6; 7). It represents an attempted critical analysis of the research of the past few years rather than merely a summary review. The original intent, that of presenting a rather comprehensive or inclusive critique, proved to be an overly-ambitious one; so, perhaps, a more appropriate title for this paper would be "Some Somewhat Random Notes on Research Relative to College Reading" rather than "The Status of Research in College Reading."

For the most part, the reports of research of the past five years have been utilized in this analysis, including a number of reports referred to by this writer in his two previous reports (6; 7). Over this period of time there has been a noticeable decrease in reports of the type which are mainly descriptions of programs. There also appeared to be relatively fewer pertinent reports during the past year. Time limitations on the writer's part might explain, in part, this seeming decrease; however, in addition to using some of the regular sources for location of pertinent references, the issues of the last year and a half to two years of twenty-five to thirty periodicals were examined systematically also.

Many periodical articles were not actually or clearly reports of research, although a number were presented as, or suggested as being such. Gains in reading abilities or skills were claimed by practically all who reported on, or referred to, actual programs; but bases for evaluating gains were considerably varied and were often not clearly identified; and tests of significance were "significantly" lacking. There was somewhat of a tendency to over-generalize on the basis of obtained results and to accept purported results and conclusions uncritically.

There are a number of areas under which the research referred to in this paper might have been categorized. The listed areas following are only a few of the possibilities. These areas were determined rather arbitrarily, and no pretense of being all-inclusive or comprehensive is being made.

Surveys of College Reading Programs

Several relatively extensive surveys of college reading programs (3; 5; 29) indicate that such programs are made available to, or are taken advantage of by, only a small proportion of the college population. Barbe (3) found, several years ago, that schools gave assistance to from 25 to 1,200 students a year, with the average number being a little over 300. With the increasing emphasis that has been given to college reading programs in the last few years, it would seem rather likely that a greater number of students is now being serviced — although recent questionnaire data, obtained by Causey from state universities and large private institutions and analyzed by Pellettieri, revealed enrollments in reading courses of from 14 to 500 students per semester (29). There is great variation in the length of courses offered by various schools and in the types of practice materials used (3; 29). Survey data also indicate that a majority of schools do not give credit for work in reading improvement courses (3; 23; 29). Machines or mechanical devices are used in many programs, with rate controllers, tachistoscopes, and films being used most frequently (3).

Effectiveness of Methods Used

Most programs appear to be using a number of different methods, devices, and/or other activities (3). While there seems to be little agreement as to methods to be used, there have been few apparent or intended attempts to evaluate the relative effectiveness of specific methods or procedures, although there have been suggestions that effectiveness results from a combination of methods or procedures (24; 38; 47).

Vocabulary growth has been reported by several as the most difficult aspect to attain (4; 8). One investigator found greatest gains resulting over a short period of time with groups who had read orally (48). Several others have reported greatest gains resulting with use of oral activities, such as analysis and discussion, also (4; 16).

Effectiveness of Mechanical Devices

A majority of reported college reading programs used some type of mechanical device; however, the machines used varied in such programs (3). There were found few reports of programs which did not claim more or less effective results when machines were used, among other procedures and activities. A number of programs or investigations have resulted in reported gains in reading skills without the use of instruments or mechanical devices (4; 8; 21; 45; 48). Equal gains in general reading ability have been achieved by groups using rate controllers and groups motivated without any instruments, but greater rate gains were made by groups using instruments. (42; 45).

There has been somewhat of a decrease in very recent years in mention of and emphasis upon use of the tachistoscope in reading programs. Its possible value as a motivating device has been noted (22; 47). The reaction of reading program participants to the tachistoscope, or their evaluation of its effectiveness, has frequently been negative (1; 22; 45; 47), although this has not been the case entirely (39). A critical analysis of the research involving the tachisotscope and of claims supposedly based on research evidence (40) leaves considerable doubt as to the validity of purported values of the tachistoscope. Use of other rate controller devices has been found to produce much more beneficial results than has use of the tachistoscope (1; 39).

Test gains in reading ability made by groups receiving training in perceptual speed and in perceptual span have been found to be not significantly greater than those of control groups who had not received such training (19; 25). In fact, in one study a control group without tachistoscope training made the greater gains in reading rate (25). Experimental evidence indicates that groups trained exclusively to improve eye movements with mechanical devices will achieve results inferior to those of groups who have concentrated on comprehension aspects of reading, supplemented by use of mechanical devices (24).

Perry and Whitlock (30) have presented an interesting and provocative clinical rationale for the **Harvard Reading Films**, this rationale being based on the thesis that passive attitudes and assumptions provide firm roots for reading difficulties. They claimed a definite absence of scientific evidence of worthwhileness of reading programs and of the effectiveness of various devices and maintained that, in view of such absence, the practicing teacher needs to "spell out in a clinical logic his assumptions and his rationale" (30:25).

Effects of Reading Training Upon Academic Achievement

A relatively high relationship between reading ability and academic achievement has been rather commonly assumed. However, a number of investigations have not found as high a relationship as this general assumption might indicate (10; 17; 37; 46), even though results have been interpreted otherwise by some. Several investigators have deplored the absence of valid research evidence that work in reading improvement programs results in better academic achievement, as determined by grades (27; 30; 33).

In general, better grades have reportedly been found to have been obtained by students who had had reading improvement training (11; 26; 27; 31; 32; 33), but the results of several studies investigating this give cause for some degree of doubt. The gains found in these latter studies have not been found to be highly significant (11; 31; 33).

There have been indications that factors which affect reading ability also operate more generally, i. e., affect other phases of human growth or development also (17; 33). Motivation has been suggested as a critical factor in academic achievement (33; 47), as has also the degree of seriousness with which work is approached (7).

Permanence of Gains

Gains effected as a result of reading improvement programs have been determined largely in terms of increases in scores obtained on standardized tests or on other informal, and less reliable, testing attempts. Very few studies of permanence of gains have been reported (2; 31; 41). Those investigations done tend to indicate that, over a period of time, there is some loss of the improvement of reading skills achieved by the end of a program, but the level of these skills still remains appreciably better than the level obtaining before participation in a program. The relative lack of adequate studies of permanency can perhaps be accounted for, to some extent, by the difficulties encountered in getting complete data for original groups after a period of time has elapsed. The impossibility of controlling, or of even identifying adequately, intervening events and experiences also poses the question of how much maintenance of gain can actually be attributed to an original improvement program. A lack of experimental control groups in investigations of permanency also adds to the difficulty in interpreting, or generalizing from, obtained results.

Materials Used in Programs

A great variety of materials has been found to be used in reading improvement programs (3). A few of those mentioned in reports of programs are common to a number of programs, but no two reported programs seem to use exactly the same sets of materials. A number of programs utilize materials devised by those conducting such programs.

A considerable number of reading practice materials has been published during the last few years. Many of these seem to be outgrowths of specific reading programs, which perhaps suggests that available materials have limited adaptability with respect to specific programs. The pressure on many college staff members to "publish" might also have accounted for the appearance of some of the materials.

No reports of actual intensive evaluations or comparisons of specific materials were found. The results of some exploratory research (as yet unpublished), carried on at the University of Texas by Dr. Elsie J. Dotson and the writer, give reason to doubt the suggested or claimed comparability of levels of difficulty for some recently published materials.

Diagnosis

In spite of the extensive work of the Committee on Diagnostic Reading Tests (14; 15), and the wide publicity given the DRT by the Committee's chairman, there still seems to be a need for additional or more adequate diagnostic instruments and procedures. Perhaps largely because of the particular orientation and training of those who work with reading improvement programs, there seems to be a tendency on the part of some to stress the emotional and personality aspects, for some to stress the mechanical and isolated skills aspects, and for others to stress the physiological aspects. Many, of course, consider all of these aspects.

While in some programs few or no apparent attempts are made to diagnose for purposes of determining specific types of procedures, work, or materials to use with various students or groups of students, many do make such an attempt. Many diagnose on the basis of results obtained with reading achievement tests, most of which leave considerable to be desired insofar as diagnostic instruments are concerned. A study of twenty-eight reading tests, each of which yielded three or more scores, showed forty-nine types of reading ability covered, with each of twenty-three of these being included in only one test (43). Tests which afford a break-down of the mental abilities involved in reading have been found to be much more valuable for diagnosis and prognosis than have tests of general reading ability (44). It has also been found that the more general reading skills, such as vocabulary and comprehension, are more closely related to general reading ability than are the more specific skills, such as word recognition (44).

Investigations of the value of determining average change in palmar skin resistance with psychogalvanic response techniques and positive figural after-effects have yielded fairly negative results (9; 18). There have been some indications that listening ability of retarded readers is closely related to actual reading ability (36), but the degree of such relationship is still somewhat doubtful. Poor study habits and various emotional difficulties being demonstrated by retarded readers has also been noted (35, 39; 47); but whether these are causal or resultant factors has not been shown clearly.. Vocabulary ability and ability to analyze words in terms of structural elements (such as affixes and roots) have also been found to relate positively to general reading ability (20).

Emotional and Personality Problems

This particular area merits much more time and space than the brief reference the writer was able to make to it here. A definite relatonship between reading ability and personality problems has been indicated by investigations, but the nature of such a relationship is still far from clear at the present time. The area remains a field of controversy largely because of apparently differing views of the nature of the process of reading, differing views of learning, and differing theories relative to personality (34).

A number of studies relative to poor or retarded readers have suggested that personality or emotional problems play a part in reading difficulties (35; 39; 47). Some have reported positive results when psychotherapy rather than actual reading instruction was given (21). It seems likely that both may often be needed.

Concluding Statements

Certainly a number of other areas merit some type of analysis or review, but only passing reference will be given here to a few areas which would appear to merit further investigation and research. In general, small gains in comprehension have been reported to accompany rate gains (14; 15), although there seems to be a slight tendency recently to emphasize comprehension gains obtained or to claim greater gains. A drop in comprehension accompanying rate gains has been noted by some (39). Purported comprehension gains have usually not been tested for significance. There has also been a tendency to report comprehension gains in terms of per cent of increase, which is relatively meaningless for interpretative purposes. The transfer of gains to more practical or realistic stiuations than usual reading program activities has also been noted to be considerably less than post-training results obtained with reading tests would indicate (39). Difference in number of training sessions, e. g., versus twenty, has not seemed to affect greatly the relative amount of progress made (1), although some individuals have been found to continue making gains in speed for considerable length of time (39).

There seems to be a definite need for more research in the area of college reading. While many reports have appeared, there is somewhat of a paucity of reports of good, definitive research in the literature. Among the more notable lacks in the reported "research" are the following: the absence of statistical analysis in many studies, the lack of control groups in many investigations, a failure to test for significance of results, weak designs or almost complete lack of a design in a number of studies, unwarranted conclusions or interpretations, and failure to control many intervening variables. An unawareness of, or a general failure to consider or to recognize, regression effects has also been noted (29).

There are, perhaps, a number of possible reasons for the relative lack of adequate research. The apparent lack of statistical sophistication or "know-how" on the part of some who are involved in college reading programs and the lack of orientation toward, or familiarity with, research might be one explanation. A simple lack of interest in research, or of appreciation of its significance, seems to be another possible reason. The lack of time on the part of staff members engaged in reading programs also precludes much research being done. The inability to control many variables adequately introduces another obstacle. Limiting or gathering various types of population samples needed often is a relative impossibility. Finally, the difficulty in interpreting research results at applicational levels is frequently evidenced.

There are a number of areas with regard to which we still lack accurate or precise information.. The degree to which supposed gains made in reading programs actually transfer to more functional situations has not yet been clarified adequately. What do reported gains in rate mean? What is good comprehension and what skills are involved? What specific reading demands are made in various content areas and how can students best be helped to more successfully meet such demands? What are the effects of using materials of various levels of difficulty in various types of programs? What further work can be done in devising tests and other reliable evaluative techniques which really get at the things we hope to achieve or want to measure? Further questions such as these could easily be posed. It is to be hoped, now that college reading programs have, in general, passed the novelty stage, that there will be more critical apppraisals and evaluations of such programs and their activities and that further and more adequate and meaningful research might result.

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AN EVALUATION OF SELECTED METHODS OF USING READING PACERS

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INTRODUCTION

Remedial reading students at Texas A. and M. College have consistently expressed the opinion that reading pacer, or accelerator, training is of paramount importance to their progress in reading (1, 2). Long experience has also convinced many professional workers in the field of the value of reading accelerators, when properly used. An important problem remaining to be solved is that of how the reading accelerators may be used most effectively in a given program.

The practice at Texas A. and M. College has been to instruct each student to read alternate articles in the S.R.A. Reading Book with the accelerator. Initial accelerator settings were determined by the students' rate scores on the Diagnostic Reading Test, Survey Section,, Form C. Mullins (3), however, reports good results at Lee College with the practice of forcing students into rapid reading by setting the accelerator for high rates of speed at the beginning of training.

METHOD

The experiment reported in this paper was conducted during the spring semester of 1954. Two hundred remedial reading students, approximately 71 per cent of the total number enrolled, were studied. Excluded from the study were those students who were not given accelerator training because of their need for phonetics training and those superior students who were given more than the one standard laboratory period per week. Students were allowed to choose the period during which they would receive accelerator training.

The various sections of students in the twenty-eight laboratory periods were then given different instructions to follow in their work. In this way the kinds of instructions could be evaluated by comparing the semester laboratory grades of the students who received each particular set of instructions. Laboratory grades were used as the critierion because they provide a single index representing the students' improvement in both reading rate and comprehension, as measured by the articles and tests in the S.R.A. Better Reading Books. It is true that grades tend to be highly subjective and vary from one grader to another, but all grades were assigned by the writer. In addition, a number of students were independently regraded by Mr. A. E. Denton, also of Texas A. and M. College. The high level (92 per cent) of agreement found between the two graders may be taken as an indication of grade reliability.

TABLE I

SUMMARY OF INSTRUCTIONS GIVEN VARIOUS GROUPS

Group	N	Ratio of Accelerated to Non-accelerated Articles	Initial Accelerator Rate Setting
A	38	1:1	450 WPM
B	45	1:1	DRT rate score
C	32	3:1	DRT rate score plus 50 WPM
D	41	1:3	DRT rate score plus 0*
E	44	1:1	DRT rate score plus k*

*Plus 40 WPM if DRT raw comprehension score was 30 or more; 30 WPM for comprehension score of 255-29; 20 WPM for comprehension score of 20-24; and 10 WPM for comprehension score of less than 20.

RESULTS

It became evident early in the semester that the students reading three accelerated article to one non-accelerated article were not making progress comparable to that of other students, and the 3:1 design was dropped. Most students with the 1:3 design also had to be changed to a 1:1 design because of lack of progress. Thus, among the three designs tested, the 1:1 design proved to be of the greatest value for the majority of Texas A. and M. students.

Variation in initial accelerator settings was more fruitful. Many students in the 450 WPM group did complain about the very high initial setting. A major drawback was the necessity for finding time to allay the anxiety engendered in the students by the enforced high speed of reading. To the extent that students could be individually reassured, anxiety did not become a serious handicap.

Chi-square and the tetrachoric coefficient of correlation were chosen to test the relationships between the various types of instructions and grades. Students in the groups given arbitrarily high initial accelerator settings (Groups A and C) made significantly more high grades than did the others (Groups B, D, and E). The calculated chi-square was 6.75, which is significant at the 1 per cent level of confidence. The students in Groups A and C made significantly more high grades than did the groups in which the accelerator setting varied according to DRT Comprehension scores (Groups D and E). The chi-square was 6.14, which is significant at the 2 per cent level of confidence. Tetrachoric r was .30, again significant at the 5 per cent level.

In order to be certain that the superior achievement of Groups A and C was not due to superior initial reading ability, as measured by the DRT, the means and S.D.'s of Groups A and C were compared to those of Groups B, D, and E. As can be seen by reference to Table 2, there are no significant differences between either the rate or comprehension means or the S.D.'s.

TABLE 2

RATE AND COMPREHENSION PRE-TRAINING MEANS AND S. D.'s FOR CONTRASTED GROUPS

Groups	N	WPM Mn.	S.D.	Comp. Mn.	S.D.
A/C	70	260	52.31	29.55	5.99
B/D/E	130	256	50.62	30.30	5.06
Total	200	257	53.18	30.04	5.40

Although the averages of the sample studied do not indicate extremely low reading ability, the high standard deviations do show the heterogeneity of the sample. It must be remembered that the most retarded reading students were placd in special classes and were not included in this study, while a few superior students were also excluded since they were given more than one period of accelerator training per week.

While processing the data, it became evident that another variable was operating. It appeared that the smaller the laboratory section in which a student worked, the more likely he was to earn a high grade, irrespective of the instructions he had been given. This finding is, of course, precisely what one would expect. The more individual attention a student receives (determined by how many students there are to deal with in a given period), the better the student's progress should be.

A Pearsonian correlation of -.45, significant at the 5 per cent level, was calculated between size of section and grades. This finding does not negate the ealier findings since each instructional group encompassed both large and small sections. It does suggest, however, that the amount of individual attention which can be given a student may be of greater importance than the type of instruction given.

CONCLUSIONS

The findings in this study must be interpeted in the light of the nature of the students studied. All students were male, and only "average" remedial reading students (below college average) were studied. Mean DRT scores for this group at the commencement of training are given in Table 2. For this group, and perhaps for similar groups, the following conclusions may be tentatively offered:

It would seem that an arbitrarily high setting, such as 450 WPM, for all students may lead to student anxiety and should be used cautiously; and that adding a constant, for example, 50 WPM, to the DRT rate tends to give optimal results with less anxiety on the part of the students. The more individual attention a student can be given, the better progress he may be expected to make.

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TRENDS IN COLLEGE READING PROGRAMS

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As Ralph C. Staiger pointed out, in part, in his paper at the 1953 Southwest Reading Conference (11), college reading programs have had a very interesting relationship with the field of psychology. The research necessary to establish reading courses came originally from the classrooms and laboratories of experimental and educational psychologists. The actual teaching of such courses soon shifted, however, to educators, English teachers, and the like, who were more at ease with classroom management. These teachers of college reading courses even borrowed some of the instruments commonly found in experimental psychology laboratories such as the tachistoscope. Perhaps without clearly understanding the values and limitations of the ideas and instruments they had borrowed, educators carried the college reading program into its second phase. This period was characterized by what amounted to mass instruction. Training was extended to include drill in various reading or study skills with intensive use of the common tools of education as the workbook or text.

Finally the present, or third, stage in college reading programs was reached. In the last few years there has been a growing recognition of the significance of personality and emotional factors in reading difficulties. As a result, individuals trained primarily in guidance and the student personnel viewpoint are entering the college reading program in increasing numbers. Others also becoming active are analysts, both lay and professional, play therapists, group therapists, directive and non-directive psychotherapists, and many others of this type. It would appear that work in reading has made a complete circle away from experimental psychology, through the hands of educators and now has swung back under the aegis of those trained in dynamic psychology.

When considered individually, however, many college reading programs have not made this complete circle of transition from a laboratory experiment through a group teaching procedure to a guidance-oriented approach. Examples of programs which have developed only as far as the first or second stage are constantly being reported in the literature and far outnumber those of the third type. Probably the greatest number of present-day programs are actually of a mixed nature, but for the sake of discussion it is profitable to review the three types as though they did not overlap or merge in practice. In the following analysis, then, we shall point out the apparent philosophy of reading, the procedures used to implement this philosophy, the assumptions underlying these procedures, and the limitations inherent in each type of program.

The apparent philosophy underlying reading programs depending largely upon mechanical devices is that reading is basically a mechanical act in which a group of rather unrelated skills such as rate, comprehension, and vocabulary are also involved. Assumptions inherent in this philosophy are the interpretation of eye-movement studies as indicating that these behaviors are the essence of reading and can be modified by eye-movment training with consequent improvement certainly of rate in reading and, possibly, of comprehension. In our opinion, this is a logical, if inaccurate, extension of the ideas gained in the psychological laboratory studies of eye-movements. A further assumption is that training of any one of the skills is reflected in general improvement of reading in all types of situation. For example, rate training alone is supposed to result in improvement of both rate and comprehension. From the generalized results expected, it might be concluded that the administrators recognize an interdependence of those reading skills but the atomistic nature of their training programs refutes this. Thus apparently there must be another assumption that, despite the expectation of generalized improvement from training in a single skill, intensive training in several skills simultaneously is not essential. Transfer from specific training to generalized gain is apparently expected.

The procedures used in mechanistic programs have been widely publicized and certainly do not need extensive description here. But there are two varieties of such programs which should be distinguished. One stresses rate training almost exclusively and employs such devices as the tachistoscope, reading film, metronoscope, or more recently, any of a number of rate controlling devices. Apparently the only concept of rate in the total act of reading stressed in this program is the need to increase it indiscriminately. The other type of program emphasizes vocabulary or comprehension or both more than it does rate. It employs a collection of varied reading selections with appended questions on one or both of the skills. Although it may not seem mechanistic in its lack of use of machines, this latter type of program should be included in this category, in our opinion. It is mechanistic in its assumption that sheer repetition or drill in vocabulary by some such technique as defining words or in comprehension by constantly answering questions results in more intelligent reading.

The limitations of mechanistic programs are numerous but they have not been sufficiently recognized to halt the constant spread of such approaches. They do produce what are probably temporary gains in rate for a sizeable proportion of students and adults. Some small gains in comprehension are also made by many of those trained either in a purely mechanical or skills-drill program. There is apparently a slight transfer of gains in rate and comprehension to textbook reading. But there is little or no controlled research available to show that these gains are enduring or produce long-range changes in efficiency of reading or school achievement. Moreover, such programs produce little or no formal gains in vocabulary or reading methods or methods of study which might conceivably influence future success in school or business.

Other limitations present in mechanistic programs are those characteristic of any attempt at mass education by a sterotyped approach. Few of these programs stressing rate make any training distinctions between those who can profit from mechanical acceleration and those who cannot. For several years we at Florida have been attempting, with only moderate success, to discover some means of identifying the student's potential for growth in speed. In this research we have followed the indications of Traxler (12) who pointed out the marked range of individual differences in fluency of associative thinking or of probable potential for growth in speed.

Thus far, the results of these experiments indicate that differences in fluency in a simple, controlled association test are marked and that these differences are positively related to gains from instruction in rate and comprehension. Other research (8) indicates that the personality traits of anxiety and compulsiveness enter into the student's ability to profit from rate training. However, we still do not kow how to identify accurately those who will profit from mechanical acceleration. Certainly then, our efforts should be devoted to more effective predictive diagnosis rather than to broadening the scope of a mechanical programs.

The limitations of the skills-drill programs are again those commonly found in mass educational processes. Most of the materials used are based on the assumption that repeated practice of an act such as reading leads to improvement. Thus we see students practicing reading sentences, or paragraphs, or slightly longer selections, and answering questions demanding recall of main ideas, details or conclusions and inferences. In the vocabulary area, we see students given lists of words whose meanings they are to memorize, or lists of affixes and roots they are supposed to recognize later in new words. Or students are given a series of exercises to familiarize them with such word relationships as synonyms, antonyms or homonyms.

The basic but faulty assumptions in this approach are first, that learning occurs from sheer repetition and secondly, that we know enough about the great mass of our language to be able to predict the word needs of individual students. It is true that the repetitive comprehension drill does induce more careful reading of a sort but the student does not actually learn how or when to read intensively or rapidly. He actually learns next to nothing about the act of reading or how it may be varied under different purposes or reading demands. The results of such training commonly show some gains in accuracy but the student is not a more discerning or intelligent reader unless he develops his own insights into relative reading approaches to purpose, style, difficulty and the nature of the content.

With respect to this type of approach to vocabulary, it may be pointed out that we do not know how large our language really is, how rapidly it is growing, or how to make an adequate cross-sectioning sample for study purposes. Neither can we anticipate the exact vocabulary needs of each student since these vary according to his major course of study, his cultural background, and the professional and cultural level at which he attempts to function in the future, as well as a number of other factors. There is ample reason to believe that the approach to vocabulary through the process of learning words is inferior in long-range values to instruction in techniques of handling words as they are encountered (3).

The second phase of the circle of college reading programs may be analyzed in much the same fashion by pointing out the basic philsophy, assumptions, procedures and limitations. This type of program recognizes two postulates: first, that reading is an intellectual act characterized by insight and planning and secondly, that the reasons for difficulties in reading are so varied that group remedial instruction is almost impractical. The procedures followed involve identification by testing of the reading or study skills in which the student is or feels he is weak. He is then given materials to help him learn the tools and methods which would help him improve this skill. He is also given instructional materials which will help him understand the how, when and why of using these tools and methods (10). Finally he is given some appropriate reading materials in which he can practice and determine his own success in applying the new approaches. When necessary, this process is accompanied by instruction verbally or through the medium of reading in understanding the act of reading, the interdependence of rate and comprehension, the concept of flexibility of rate, and the necessity of pre-planning each reading situation. Basically, this is a program of individualized instruction in how to read in different situations, or how to study more effectively. The major emphases are: first, teaching the student new ways of reading; second, counseling the student; and third, providing practice materials for applying the new reading techniques.

This program of instruction and discussion with the reading counselor continues until the student feels his needs have been met, or until he terminates the procedure. Flexibility in the program is achieved by making the initial application by the student for assistance entirely voluntary and by allowing him to stipulate the hours of his attendance at the laboratory to suit his own schedule. Another reason why group instruction is not feasible is the variation in the types and length of plans made with the student. He may concentrate on any of three or four problems related to speed of reading, or of comprehension of differing intensities in a variety of content fields, or on tools for vocabulary growth, or any of a half-dozen study skills. In all, about twenty separate needs can be identified and individual programs planned for each of these for periods varying from a few weeks to a year.

The limitations we have found in this type of program are those of serving a relative large number of students with a limited staff and of handling adequately the many personal and social problems which are affecting the reading performances of the student. Last year we served over 700 college students wtih a staff of four full-time persons. At the same time almost 250 elementary and high school children received diagnostic and therapeutic services. We find it quite a problem to process as many as 200 new entrants a month and offer the degree of individual guidance we would like to give.

Although we have four other clinics available for personality, marital, speech, and physical therapy problems, their services are similarly limited. Our staff is cognizant of the great problems in helping compulsive, anxious, neurotic, or disorganized individuals to read more effectively. These emotionally disturbed students need a great deal of individual counseling, varying through all the degrees of permissiveness plus large doses of supportive therapy. Thus far, we have not found an easy answer within our limited resources.

We would like to be able to do more educational and vocational guidance for students who present problems of aptitude for college. We do not have the time we would like to help student adjust to college life with its problems of concentration, being away from home, or achieving a successful social life. The emotional maladjustments of insecurity, inferiority, and parent-child or authority relationships cannot receive the attention they need. These needs of the student are not easily met within the confines of a program primarily structured to help students overcome their reading difficulties.

The third type of college reading program which has been emerging for the last few years is characterized by a completely psychologically-oriented approach. Little or no emphasis is laid upon testing or reading diagnosis, or instruction in reading or study skills. The apparent basic assumption is that reading difficulty is a symptom of a greater personality problem which must be attacked first. Presumabily improvement in reading will spontaneously follow the relief of the emotional maladjustment.

It is true that a few workers in this field (5, 6, 9) utilize varying combinations of remedial work, play therapy, group or individual psychotherapy according to the types of personality problems the poor readers present. But there is a larger number who apparently conceive of work in remedial reading as symnonymous with non-directive therapy (4, 7), depth therapy, or even psychiatric treatment. There is, of course, some evidence of spontaneous reading improvement after combined group therapy and remedial work as reported by Bills (2) or after play therapy (1) or other types of psychotherapy. But this approach is not universally successful. In fact, group reports show that psychotherapy does not aid a much greater proportion of retarded readers than do more common methods such as group remedial instruction or the semi-counseling approach.

The limitations in the so-called clinical program are marked. This approach demands a variety of highly-trained professional personnel available. These professionals must be ready to devote extensive periods of time to treating the needs of individual or groups of students. They must be well trained in personality testing and the diagnosis of personality problems. In addition, they must be skilled in numerous types and intensities of therapy, and, if they would be successful with all the kinds of students they meet, must be able to use directive as well as non-directive techniques. Even when all these skills are available, there is little definitive research to guide the clinicians who work with poor readers. We still do not know exactly what types of therapy will produce improvement in reading in every kind of personality maladjustment produced by reading failure. These limitations of available trained personnel, of the expense of prolonged treatments, and the question of whether a clinical approach is really the answer to the problem of improving reading will continue to limit the growth of this newer type of college reading program.

Probably in the not too distant future there will evolve a college reading program which will utilize the best ideas and techniques of the three current procedures. This ultimate program will offer training in rate by mechanical and others means, when it knows how to choose the individuals who profit from such training. It will probably offer directive training in other reading and study skills or a non-directive type of reading training when, following the lead of such programs as that at Michigan (8), it can clearly discover how to relate the type of training to the personality characteristics of the students. The future program will probably reduce the tendency to almost indiscriminate use of drill and group instruction and substitute a greater emphasis upon conveying insights and understanding of the act and tools of reading to the student. More extensive use of all types of counseling will appear as the concept spreads that reading performances are related to the other problems of the student. Finally, psychotherapeutic techniques will be employed when they are necessary to supplement these other procedures or the problems of the student are so severe that the less probing techniques are inadequate.

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READING IN RELATION TO LISTENING

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The rapid growth of technology and social change has brought to communication the unprecedented task of distributing the various knowledge which are the outgrowth of these changes. Mass media of communication claim our attention from every corner. From a dozen daily sources comes information that ranges from propaganda to scholarly and scientifically-produced studies. Because we are a democracy, part of our capacity to survive is based on our collective ability to think and behave intelligently in relation to these communications.

In order that we may think in a positive fashion relative to these media, we must know something about them from the standpoint of their relative impact upon the learner. We should also consider whatever pertinent relationships are inherent between these media. In so doing, we may learn what is that maximum of learning which may be expected from a planned organization of them relative to a given population.

The relative incidence of language activities as they operate within the language habits of the average American has been studied by Rankin (19). He estimates that they are distributed as follows: 45 per cent listening, 30 per cent speaking, 16 per cent reading, and 9 per cent writing. Another study of a school age population (4) indicated that 98 per cent of their out-of-school language activity was either speaking or listening. This suggests that there is much more speaking and listening than reading and writing. However, from the viewpoint of research, there are approximately twenty times more studies which have appeared in the literature on reading than on listening.

Some of the questions which confront the researcher in reading and listening are these: What is the relationship between reading and listening or auditory comprehension? Which method produces the most immediate learning and which the greater delayed recall, or is there no difference? What relationship has the level of difficulty of material with learning by these media? Does training in one area produce a transfer of training to the other? Can listening, like reading, be increased through training?

Investigations which have attempted to answer these questions have in many instances met with equivocal results; therefore, it is difficult to make qeneralizations which will do justice to their findings. However, to simplify the mass of data, some apparent generalizations are made here from the literature and some studies are cited as illustrative.

Most of the studies agree that once a person has learned to read, there is a degree of relationship between his listening and reading comprehension. The correlations from such studies show degrees of relationship from .30 to .80 and even higher (1, 2, 14, 16). This range of correlation values suggests varying degrees of sensitivity of the measuring instruments used and the choice of the variables included; that is, the age, education, and intelligence of the subjects, on the one hand, and the difficulty, rate of presentation, and the kinds of material, on the other, are certainly factors in the range of these correlations.

In an unpublished study just completed by Agatha Townsend, the Silent Comprehension and Auditory Comprehension Sections fo the Diagnostic Reading Test Battery were used as measuring instruments with 174 high school students in St. Louis. The correlation found at the tenth grade level was .601; for the eleventh grade, .626; and for the twelfth grade, .699. Because of the parallel nature of the two tests used in this study, in which the sources of material are identical and the types and difficulty of items were made to be as parallel as possible, it would seem that a real difference between the skills being measured did exist, since the correlation coefficients were still far from perfect.

Several studies have been made to determine whether reading or listening is the best medium for learning. Early studies, beginning as early as 1894 and continuing to the 1930's, indicate a preference for verbal presentation as a medium for learning (10, 14, 15). By 1930 the work of Young (22) indicatd a more refined use of statistical and experimental procedure than had prior studies. He found in the study of the language habits of two thousand students that silent reading by the pupil catches up to his listening comprehension skills by the time he reaches fifth grade. By the sixth grade his reading comprehension skills begin to exceed his listening comprehension. Several other studies at the high school and college level since that time have indicated that, in the main, silent reading produces greater comprehension than listening, when variables of material difficulty and the like are held constant (2, 5, 16). Illustrative of these studies at the college freshman level is one done by Cory (9). He attempted to or from identical college freshmen learn more from lectures or from idntical material given them in silent reading form. His conclusions were that the students had better immediate recall for materials read than heard in a lecture and that there was no significant difference in delayed recall between the amount retained by the two methods, although the results were slightly favorable to the reading group. He also concluded that students scoring in the highest quartile in intelligence tended to comprehend better by reading than they did by listening. Another study (11) also concludes that a superiority of listening comprehension appears to be in inverse poportion to intelligence; that is, the slow learning pupil often listens better than the bright student.

Several studies have attempted to discover what trend in listening ability is predictable, given reading ability, and vice versa. It is concluded that:

1. When listening ability is low, reading ability tends to be low.
2. When listening ability is high, reading ability is not predictable.
3. When reading ability is low, listening ability is not predictable.
4. When reading ability is high, listening ability is to a small extent predictable, likely to be high (6).

The difficulty level of the material has been found to be a significant element as a factor in the choice of the best medium for its presentation. Generally it may be concurred that as the difficulty of the material increases, listening ability decreases as the favored method of comprehensive communication and reading comprehension increases (11, 7, 8). Auditory presentation limits itself to familiar material, serial, if possible, in nature. Auditory memory for strange and meaningless material is markedly inferior.

The cultural level of a population also reflects in the medium best suited to learning. One study suggests that the higher the cultural level, the greater the capacity to profit from auditory presentation. There is, however, a point reached where the difficulty of the material outweighs the cultural factor, and the advantage of auditory presentation is lost in favor of the visual (7, 8). Another study suggests that the lower the cultural level of a people, the more likely they are to prefer listening to reading (17). However, this study also suggests that the more reading ability present, the more reading becomes the preferred mode of learning.

Interest in a given subject is also an important factor when considering the best method of communicating ideas. According to one study (17), the more interest one has in a subject, the more he tends to prefer that medium which lends the fuller treatment. Another study (7, 8) suggests that whatever is human, personal, or intimate seems to be favored by auditory comprehension. On the other hand, of course, materials which call for close discrimination and critical judgment are best facilitated by reading.

As we have previously indicated, many of the studies in this area given equivocal results. The relationships between reading and listening skills are high, but by no means perfect. This certainly suggests that within most individuals a real difference between reading and listening skills does exist. Yet the question raised in many of the studies is: What is the real basis of language communication? The answer is relatively conclusive: Reading, verbal expression, and listening are a part of the central thought processes of language symbolization. Thus, comprehension, being largely a centrally-determined function, operates independently of the mode of presentation of the material (13, 16, 17).

This would suggest that if the various psychological and physiological factors and the factors of training and use could be kept constant, then a more nearly perfect correlation would result from a measurement of the two. Both Spache (20) and

Goldstein (11) are in effect suggesting this when they consider that listening ability may suggest a level of educability or ability to progress in reading; that is, if a student is able to comprehend well above his present reading level, there is good reason to suspect that he can be taught to read up to this level of auditory comprehension. This, of course, is related to the reasoning that all language skills are a part of a there are no psychological or physiologoical factors to hinder levels of educability within a given person, presuming that there are no psychological or physiological factors to hinder one or favor the other.

Spache (20) and Brown (3) have both done intensive work in an attempt to construct instruments for the measurement of listening. Tests were constructed by Brown to measure the ability of the listener to synthesize the component parts of a speech to discover the central idea or ideas, to distinguish between relevant and irrelevant material, to make logical inferences, to make use of contextual clues, and to follow a fairly complex thought unit. The Auditory Comprehension Reading Test of the Diagnostic Test Battery, which has been the work of Spache and the Committee on Diagnostic Reading Tests, attempts to measure auditory comprehension of main ideas, details, and inferences.

There are seveal factors which are difficult to control when listening comprehension is involved. For example, it is most difficult to eliminate peripheral distractions in the administration of the test. Voice, the speaker's mannerisms, and other overtones are variables which can affect the validity of the administration. The interplay between the personality of the speaker and the listener is a factor also which may be important in a given instance, yet very difficult to discover.

Rate of delivery is also an important variable. As rate of speaking goes above a certain optimum level relative to other variables such as intelligence level, comprehension falls (11). Just what the best optimum of rate is, considering other variables present in the testing situation, is still open to study.

Even when a recording is used, there is still some personality present in the form of the sex of the speaker, voice quality, and the like. Actually, of course, it must be remembered too, that the recording introduces a highly artificial situation which may not be received by the listener as he would auditory communication in face-to-face contact. Thus, while a recording eliminates certain distracting variables, it certainly creates others. This point should be considered by those working in the field.

At the University of Florida Reading Laboratory and Clinic an attempt has been made to control some of these factors in the recording of the Auditory Section of the Diagnostic Reading Test. A tape recording was made which runs at a set rate of 150 words a minute. In order to modify some of the personality factors present in a given voice, two alternating voices are used, a male's and a female's. One voice reads a short selection and the comprehension questions, then the voice of the other sex continues the reading of the next paragraph.

Very little appears in the literature on the relationship of personality factors and listening ability. In reading, for example, there have been many studies related to the interrelation of reading difficulties and personality con mitants. The field is certainly open for the same general type of investigation in listening ability.

The Reading Laboratory and Clinic of the University of Florida has been experimenting with the Auditory Section if the Diagnostic Reading Test in a rather novel way. There are several blind students at the University of Florida. The Reading Clinic has been administering the Auditory Comprehension test to these students and scoring the test according to the presently available norms. From the results of these findings, a series of appointments are made with the student and his or her reader. The reader is trained at the Clinic in the use of various reading techniques such as scanning, skimming, reading for main ideas, and the like, in order that he may have some concept of the varying methods of approaching written materials, some ideas concerning different ways of reading, and reading for different purposes. Joint sessions are also held between the reader, the blind student, and the clinician in order to make these new learnings by the reader become of functional benefit in the reader-listener situation. To date, we have been very pleased with the subjective results we have gained from the use of the Auditory Test. Further study in this practical problem could be most rewarding to the researcher.

Such a paper would not be complete without an indication as to whether these skills discussed can be taught. Obviously, we know that the skills of reading can be. There is considerable evidence also that listening as a learning medium can be taught. The results of our small pilot study with the blind is a case in point. Other studies which have attempted to show improvement from listening training have met with positive results (12, 20). The following factors have been suggested as effective in listening (21):

1. Adequate hearing acuity.
2. Recognition of problems and obstacles such as prejudices or boredom, which must be overcome in order to listen effectively.
3. Adaptation to the specific kinds of listening situations.
4. Relationship between auditory vocabulary and visual vocabulary.
5. Ability to judge what is heard, or ability to listen critically.
6. Recognition that communication is a responsibility shared by both speaker and listener.

Perhaps these, too, are included in the thought that listening, like reading, is a part of the central processes of concentration, comprehension, and thinking in general. If this reasonable assumption is true, then stress should be placed on the semantic, syntactic, and the pragmatic use of language rather than on peripheral aspects in the form of drills in the formal aspects of written and spoken language.

In this overview of the relationship of reading to listening, it was concluded that a relatively high correlation does exist between these two media of communication. However, the fact that these correlation values are far from a perfect relationship leaves the question still open as to what are factors which differentiate between the two. Insensitivity of the measuring instruments, various distortion factors present in the administration techniques, factors of training and use favoring one or the other medium certainly are, in part, relevant.

Studies were also reviewed in an attempt to discover any trend which would indicate one medium of language as more effective for comprehension than the other. It may be generally summarized that for students at the intermediate grade level and below, listening is the most effective medium. Above this level, although various studies show that reading is the more effective medium, the results from study to study are equivocal. Extraneous factors such as the difficulty level of the material, the rate of its presentation, and the cultural and intellectual level of the student have an important part in selecting the more effective medium of communication. Thus, the conclusion can generally be drawn that effective training in either medium must consider the individual as he is. Secondly, training must consider the thought processes which are necessary for comprehension and attempt to instruct in ways of improving these, rather than dealing exclusively with the peripheral and mechanistic aspects of the media. Such attention to thought processes should certainly include work in the pragmatic use of language and thinking in general.

In the area of measurement there is still room for the researcher, especially in the measurement of listening comprehension. There is need for continued refinement of such instruments and further study in ways and means to control the many distorting variables in administration.

Very little real research has been done on equating listening performances with the personality structure of the listener. The field of research is particularly open for study at this point.

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READING IN RELATION TO SPEAKING

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Up to the present time there have been about forty published research studies concerned with reading in relation to speaking. Four people have surveyed these studies and have made fairly competent summations of the findings (2, 5, 6, 12). In the most recent of these, Townsend reports:

> The child with a narrow background of actual and vicarious experience has little stimulation for language growth; he has little to communicate. His vocabulary level is consistent with his needs, and since his needs for language are simple, he has yet to be faced with the reason for learning more and more words (12, p. 100).

Gaines (5) reviewed thirteen studies and agreed with Monroe that the factors affecting speech may also affect reading (8). After looking into several studies Hildreth felt the research indicated that "speech defects can be important secondary causes of reading disability, even though they may not always be the sole or primary cause." She also found that "the speech defect . . . may be only an added symptom of mental retardation along with reading failure, for mentally slow children tend to be retarded in speech development" (6, p. 326).

Eames reviewed additional studies. He felt that research justified the drawing of five conclusions:

> 1. Neurological lesion in the language centers or their interconnections (in the brain) may impair both speech and reading.
> 2. Failure or inadequacy of auditory association and discrimination may predispose to either speech or reading trouble.
> 3. Speech defects occur in a certain proportion of redaing failures and vice versa.
> 4. Emotional reactions to speech difficulties may impair reading.
> 5. Oral reading is more difficult for a person with a speech defect (2, pp. 54-55).

Most of the studies agree that students who have combined speech and reading defects also show a weakness in auditory discrimination. In support of this statement, the University of Utah Reading Center has found that about 70 per cent of the deficient freshman readers (those falling below the 15th percentile in reading on the Cooperative General Achievement Tests) are poor in phonic skills and 68 per cent of these need auditory stimulation before they can differentiate between short **e** and short **i** sounds. Many of these students are hesitant or inhibited in their speech patterns.*

In reviewing the research studies on reading in relation to speaking, it soon becomes apparent that most researchers have been concerned primarily with speech defects occurring concomitantly with reading disabilities. The broader aspects of reading in relation to speaking have been largely overlooked or left to the semanticists. It is important that those concerned with the whole field of reading explore what speech can do for reading and then invert the procedure to see what reading can do for speech. Through a thorough knowledge of the interrelationship, wise direction can be given to the utilization of speech in the teaching of reading.

Speech can serve reading in four ways: (1) It can be used in diagnosis of reading problems. (2) It furnishes effective catharsis by providing the feedback after reading. (3) It can serve as a teaching tool. (4) Speech aids in evaluation.

Speech can help the teacher diagnose the personality problems of the students. "Any acute emotional disturbance, whether temporary or chronic, has some effect on the speech of the person who suffers it" (10, p. 34). If the teacher is tuned to hear it, the student's inner reactions are revealed through his speech. The respiration rate, the range, the resonance, and the rhythm; the kind of emphasis a student makes; the intensty and the speed of utterance; the pauses, their timing and duration; the exactness; these make the voice the barometer to the emotional life of the student.

The voice not only is able to reveal the emotions to the teacher, but it also gives this knowledge on-the-spot. Instantaneous understanding helps to establish empathy with the student. This is how it has worked in two instances at the University of Utah.

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*Unpublished research, University of Utah Reading Center, October, 1954.

The initial diagnostic tests were all completed and it was announced to a student that his comprehension was excellent. All he had to do was build up speed to improve his reading. Instead of the jubilation this announcement should have produced, the student showed hesitancy and desperation in the tone of his voice. The class was diverted with a reading task, and the boy was taken aside. The ensuing conversation revealed that the boy was a post-polio case and speed was the one thing that he knew was beyond him. He was reassured by the consideration of the teacher, and a reassignment to another class was effected.

Another time the breathiness, high pitch, and lack of resonance warned that a girl was in difficulties. The interview showed that she planned to be a doctor because then "everyone would have to stand around and listen" to what she had to say. She was with her fourth roommate in as many months. Already there was armed neutrality with this latest roommate. This girl needed immediate and prolonged understanding and help.

How can one learn to read the barometer of the voice? There is excellent help in a new book, **The Voice of Neurosis** by Paul J. Moses (9). It is small enough to be assimilated, and it gives just the help needed.

Every reading specialist is aware of how helpful oral reading can be in diagnosing silent reading skills. Word phrasing, hesitancy, glibness, and the management of breathing provide an index to the kind of understanding the student achieves in his reading and the kind of help he must have if improvement is to be made.

In the second place, speech can serve as a teaching tool. Through speech the teacher arouses the all-important motivation that must be there before learning can take place. The teacher talks. Then he listens to see whether the student's voice is quickened to interest. Does the student's voice carry conviction of the worth-whileness of the reading? Does it declare that the student has adopted the job as his own and that he is committed to its completion? Does it show assurance that success is possible?

Unless a student knows what the situation is, he cannot marshal his forces to handle it. Speech makes it possible to orient to a readiness, to a realization of the nature of the material and the purpose in reading. By discussion the pattern of approach to the particular type of reading is defined. The proper mind-set for the reading purpose is achieved. If the material is fiction, the teacher rapidly discourages the SQ3R (Survey, Question, Read, Recite and Review) formula of attack (11). The teacher also says, "No," to a too critical mind-set. A critical mid destroys emotion; time enough for that later. For full value, fiction must be lived. So the student is prepared to enter the land of the story and gently and fully surrender himself to the keeping of the author. If the material is factual and the student wants mastery and memory, too, this is the time for the SQ3R formula. If he just wants pleasant gleanings, then SQ3R is too high-powered. The student needs to relax and go exploring. Through talking about it, the student learns to fit the technique to the material and the reading need.

Discussion also leads to creative reading. It structures the drawing of conclusions, the ability to see bias, and wariness to escape captivating fallacies.

Speech makes it possible for the teacher to recommend the proper book for the frame of mind, the problem, and the level of the student. Speech is the teacher's ally in selling the book to him. The management of proper silences, sparse comments, and understatements is important in accomplishing this.

There is another way that speech helps reading. Should the student stumble on the wrong book, psychiatrists assert that discussion about the book is a prime necessity. Frequently, more real progress can be made in learning and in therapy by the choice of a "wrong" book. It lays bare the issue in brutal fashion, so that it forces the problem on the student. Discussion that guides to proper resolution must follow this. Then true insight can be achieved.

Speech provides the neo'sssry feedback to reading. It is psychologically necessary that when something is taken in by an individual he must also have the feeling that he is putting something out. Fisher (3) calls this the mutuality need. Flesch (4) and Chase (1) call it the feedback. There is a subtle relationship between intake and output. Why does a student find correspondence courses so difficult to finish? Part of the reason may well lie in the fact that he never knows until weeks afterward, sometimes never, whether he has hit the bulls-eye in his thinking. That is what is wrong with writing. There is no feedback. Speech after reading is so much more satisfying. The response is immediate and pertinent. It brings closure with an idea or a problem. Incidentally, through speech the teacher can gauge the extent of closure and prevent it from being too complete. Psychologists have found that retention is best if closure is not quite complete. With speech the teacher can discreetly pose questions, withhold the last satisfying nut of meaning, tease the mind to new possibilities. In this way learning continues and rention is strengthened.

A psychoanalyist makes a living by helping a man to talk out his problems. Through speech undigested experience that is making a man ill is chewed over until it can be swallowed. Is it not just as reasonable to believe that reading experience cannot become integrated into a man's personality and thinking without the catalyst of speech?

The fourth way that speech serves reading is in evaluation. It is the best kind of feedback to check on error and faulty logic. It clarifies immediately while attention is riveted on the reading. There is probably no other tool as custom-made for the job of evaluation of reading as speech. Speech as an evaluation tool is a time-saver for the student and the teacher alike. It admits of fewer fallacies than any other technique because errors are more obvious and open to detection. Skillful use of speech in the teaching of reading is important. Teachers need to sharpen their ability to use it effectively.

It is easy to see how speech can serve in the teaching of reading, but when the picture is reversed, what does reading give to speech? Reading is a vital part of civilized living. A man lives richly in proportion to his depth and breadth of reading, and, conversely, he reads well if he thinks and lives fully. "An illiterate person may have been happier in an earlier age, but today he is practically certain to be severely maladjusted" (1, p. 6).

There are really two broad ways in which reading helps speech. In the first place, reading makes it possible for man to speak beyond the borders of the mediocre. When a boy asks what he needs to do to be a man, a teacher has a springboard for discussion of this vital question if he has gone with Margaret Mead through seven primitive cultures and back again to his own through the pages of **Male and Female** (7). When a rebellious freshman, stimulated by reading, probes to the truth that people who conform really find contentment, then reading has come into its own. Without the stimulation of books a man's talk is filled with the routine of living. He spends his time telling his son to wash his hands, to hurry or he will be late for school. How to make apple pie, the latest football score, and the Joe McCarthy squabble fill his day and become the dimension of his life. A glass of beer is apt to be the poetry and romance of his world.

In Carl R. Woodward's story, a toil-worn old grandmother wanted the mystery of books unlocked for her granddaughter. She says, "Hit's got sense, but hits got to larn how to use hit's sense . . . Hits larned up to hit's chance, but hits had a pore chance . . . Hit's a lot worse to be soul-hungry than to be body-hungry" (13, pp. 109-114).

Through reading a teacher can create an atmosphere of strong beauty and truth; he can introduce the the student to the fact that the world is wider than his present experience. How imporant this is, is apparent in the words of the lonely farm woman in "East Wind" (10, p. 49),

My ears is achin' to hear words,
Words like what's written in books,
Words that would make me all bright
like a spring day.

The other way in which reading helps speech is that it leads into growth of the expressed personality. In Western culture there is a special need to read, and read not just newspapers and magazines, but also books. This is one of the few ways open to the cultivation of individuality. In our streamlined, mass-produced world, tuned to its mass media, with its mass educational system, a whole group of allied forces press everyone into a mold of mediocrity, uniformity, and sameness. People read the same syndicated columns, listen to the same nationwide television and radio programs, see the same movies, are cajoled through the same advertisements into buying the same assembly-line cars, clothes, foods, and fads.

Since books time-capsule all man's ideas, can be sampled individually and at will, and are comparatively inexpensive and available, they offer an avenue to free personality development. They offer a way to each man's development of a unique configuration of ideas and the enlivening of the content of his speech.

If the talk a student hears in his home shows a lively interplay of reading on adult lives, if the teacher's speech reveals that books are a vital part of his personal living, the student will respect books and want to read. And as he begins to open books with a rediscovered sense of exploration, he will come to believe, as Haslitt did, that the richest acquired treasure of his life is the ability to read books.

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READING IN RELATION TO WRITING

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Teachers in the colleges are exposed to a peculiar occupational hazard suggested by the phrase "more and more about less and less." While the scholar discovers more and more about his particular subject, his effectiveness as a teacher may diminish if he has less and less regard for his perspectives. It will perhaps not be taken amiss if I suggest that those of us who grapple with reading improvement are also susceptible to the hazards of specialization; and since this is the last paper on the conference program, it may be in place for me, by way of summation, to point out certain larger perspectives that are implied in my assigned topic, "Reading in Relation to Writing."

Higher education has in recent years been under a mild but persistent attack for tendencies toward over-specialization. It is in protest against over-specialization that educational planners have been calling for a greater emphasis on general education. There was a time when a college diploma could in itself be taken as evidence that the holder had at least an acquaintance with many fields of learning. But as the various academic departments, spurred on by premium value of research and publication, concentrated their efforts more and more intensely in restricted areas, the broad outlook often faded from the classroom. Hence arose the demand for the general education courses, which might combine a depth of perception on the part of the teacher with expanded perspectives.

English departments have not been immune from the narrowing tendency toward specialiation. Senior members of the departments devote themselves to the tracking-down of sources and a searching-out of an author's esoteric purposes, while the important work of teaching beginning college students to use the language more effectively is left to underpaid instructors or to graduate assistants. As long as the critical requirement in advanced courses is the production of an acceptable research paper, the first college course in English is likely to emphasize the mechanics of composition, and usually the writing of expository prose.

The writing of expository prose can be an intensely worthwhile activity, but there is vastly more to the language arts, and the college English program has a vastly larger responsibility to the freshmen. It should be the responsibility of the college to help the student discover himself and his interests, to help him find his way through the vast literary resources that are available to him, and also to help him make the most of his skills in self-expression and communications. This is where we reading specialists entered the pictured. We were sure that everyone—the brilliant student as well as the plodder, and the browser as well as the researcher — could benefit from training in the reading skills. Having now achieved status in the college program, we in turn are faced by the hazards of specialization. Two of these hazards are, first, that reading improvement comes to be identified with sub-standard learning activity; and second, that we may become so interested in a mechanical process that we lose sight of purposes and directions.

We may be thoroughly convinced that training in reading skill is beenficial for students of every ability level, but when students are selected for a reading improvement program, usually the poorly-prepared freshmen are given exclusive preference because they seem to need our services most. We will get more of such material as long as high schools are graduating an increasingly larger proportion of their students and the colleges continue to open their doors to all comers. If the reading improvement work becomes altogether a "remedial" program, called on to make up for special deficiencies, it easily becomes identified with sub-standard work.

As to the other hazard, we have devised an interesting variety of techniques including pacing devices, reading films, tachistocope training, vocabulary building, and so on. The danger is that we will be carried away in our enthusiasm for one particular technique. In a large industrial establishment I visited last summer I noted that the reading improvement program consisted entirely of exercises with the Harvard reading films. The management were skeptical of the value of the program, because results were not as spectacular as they had been led to expect. It is entirely conceivable that much the same could happen with a college program that relies too much on a single approach. Last March I was fortunate to be able to attend the meeting of the four C's in St. Louis—that is, the Conference on College Composition and Communication. My colleague joined the group on reading improvement and was surprised to hear very little about the sort of laboratory and clinical procedure that has occupied us here during these last two days. The discussion was concerned chiefly with the development of abilities for undestandding and appreciating such materials as Colidge's "Kubla Khan," in which the poet communicates, or endeavor to communicate, impressions that are a good deal less tangible than those which emerge at the factual level. It may be relevant to observe that the leader of the discussion group was a teacher at a wealthy eastern small college with a highly restricted policy of enrollment.

It appears also that an alliance of the reading improvement program with the depatments of Education and Psychology may be an uneasy one. Reading improvement, it seems to me, has outgrown the educational psychology of William James and Edward L. Thorndike, with its emphasis on quantitative measurement and analyses. The newer "organismic" psychology, in recognizing that the learning process involves the whole personality and not merely certain neurones and synapses, has helped us to understand that in learning to read, the whole is more than the sum of its parts. We recognize that without standardized tests we would find it difficult to establish objectively in what direction we are moving; yet we need more than the psychologists have to offer. That something more, I suggest, is content — something to communicate.

A significant development in the colleges in recent years is the concept of communications as the basins for general education. In some schools, as at Michigan State College and the State University of Iowa, new departments of Communications have been organized, separate from the departments of English and Psychology. Growing acceptance of this idea may be seen in the growth of the College Conference for Composition and Communication as a branch of the National Council of

Teachers of English.

It goes almost without saying that the skills of speaking, listening, writing, and reading have significance only when they are a means of communication, either for the present time or for some future hearer or reader. We kow from our experience that the only tongue-tied speakers are those who have nothing to communicate, and that one has trouble in listening only when what we hear means nothing to us. The atrocious freshman English themes we labor over year after year are dull because our students have failed to discover that it is possible and pleasurable to communicate something beyond the bare bones of dry facts.

When reading and writing are viewed in the perspective of the communicative process, they are seen to be necessary and complementary to each other. There can be no reading unless there has first been writing, and there can be no writing unless there is an expectation that the writing shall be read. To question which of which came first, reading or writing, is like asking which came first, the chicken or the egg. Either is inconceivable without the other.. There is a difference, of course, in that writing, as the creative aspect of the process, demands much more of our resources than does reading. As Francis Bacon said, "Reading maketh a full man; writing an exact man."

We have perhaps tended to take too much for granted that reading ability and writing skill are correlative. We have perhaps been too willing to accept the performance of a beginning freshman on a standardized reading test as an index of his general level of achievement in all of the communications skills.

Such an assumption is an oversimplification. For the past several years we have been trying at Southern State College to lay a diagnostic finger on those beginning freshmen who are likely to run into difficulty in their first English course, where their success or failure will be judged principally on their ability to write a satisfactory series of themes.

We have long rejected as too unreliable any dependence on tests of general intelligence as a basis for classification in freshman English. We have not been altogether happy with our efforts to use reading scores as a basis for classification. We have found that among those who scored low in reading there were many who could write very well, and that some who scored high in a reading test were actually very poor writers.

It should be said at this point that writing ability is not easily reduced to statistics. Mechanical correctness can, of course, be objectively evaluated in terms of spelling, comma splices, reference of pronouns, agreement in number and tense, and so on. Textbook-minded teachers might be willing to accept such a standard, but I think students would reject it. A former high school teacher, now a publisher's representative, told me about one of his students whose imagination flowered in his written compositions, but whose spelling was atrocious. When this boy was called to account, he protested, "Any fool can spell." Teachers of composition might well remember Ernest Hemingway, the Nobel prize winner, who reproduces the unconventional language of real man, and Theodore Dreiser, who flunked his freshman English course in college.

Mechanical correctness is at best a wavering basis for judging writing ability. The notion of the split infinitive was happily discarded in the 1930's. Today, while dictionaries refuse to recognize the word **like** as a conjunction, radio announcers and news writers are disregarding the old taboo, and are writing and speaking like other folks do.

It may be that the problem of evaluating writing ability can be approached through familiarity with correct usage. Objective tests requiring the student to select correct forms from among several choices are readily available. In any effort to classify freshmen according to ability, such a test can certainly be more quickly graded, and on a more objective basis, than a written composition, which might be graded very differently by different teachers.

It is our custom at Southern State College to assemble a file of sample compositions from our beginning freshmen and to keep these for reference. We are thus enabled to know which are the obviously poor writers and which are the obviously more able. We have not, however, been able to devise a means of correlating our subjective judgments of these themes with the objective scores obtained from reading tests.

Last year it occurred to us that if we wanted to know quickly which of our students would be able to write satisfactory freshman themes, we might try to find out how well they remembered the formal grammar they had been taught in high school — the parts of speech, syntax, and so on. The test we devised was home-made, for I doubt whether any publisher of tests would offer for sale anything so old-fashioned. The scores we obtained were well distributed from zero to a perfect 46, with a median of 29. The wide range of scores showed that there was extreme variation in the knowledge of grammar possessed by our new students.

We found immediately that there was a strong apparent correlation between a knowledge of formal grammar and the ability to write a satisfactory theme. Those who scored highest on the grammar test also had written the best themes. We could not assign a statistical value to this correlation because, as I have pointed out, writing ability cannot easily be reduced to a figure.

There was a strong correlation between knowledge of grammatical terms and ability to spell. Of the 25 students who scored highest on the grammar test, only two had made an error in spelling in their sample themes.

We found a high correlation between our grammar test and and a test for awareness of correct usage, the co-efficient being .525. Against this, the correlation between the grammar test and a general reading test was only .358. If I might draw a generalized inference from these figures, it would be that writing is a specialized skill within the communication framework. A student who has accepted the rigorous discipline of formal grammar is likely to be careful of his spelling and is likely to be aware of the niceties of correct form, but it is not equally sure that he will be a rapid and efficient reader. Conversely, it could hardly be expected that the skill of reading rapidly and efficiently would in itself insure an ability to write with correctness.

Our communications program at Southern State College, which is also our freshman English program, recognizes that reading, speaking, and listening are necessary language skills along with writing ability and that these various abilities, while related, are not inevitably correlated in the statistical sense. We therefore hold that special training in reading skill has a necessary place in the college program.

8. A valid reading program includes provision for continuous appraisal of the effectiveness as a whole and of its various aspects (1, pp. 58-64).

On the same topic, Dr. Strang writes that despite varied approaches the best procedures have certain principles in common:

1. The student should feel a need for improving his reading and take responsibility for making and carrying out an appropriate individual program for improvements.
2. The need for learning to read more effectively arises most naturally out of interesting and valuable school and home activities and out of vital interests of individual students. Adjustment should be made in the total school program for needed instruction and practice in reading.
3. Difficulties that are interfering with a student's reading efficiency must be discovered and specified steps must be taken to correct them.
4. Each class is a reading laboratory, in which the reading attitudes, interests, and abilities required for success in the subject should be developed and suitable reading materials made easily accessible.
5. Special instruction and practice in reading, to be functional, must be geared into the daily reading jobs that individuals have to do or ought to do (2, p. 29).

Organizing reading programs based on valid criteria or fundamental principles such as Gray and Strang suggest offers real challenge. If one accepts these lists as principles upon which procedure is established, then one must include the following items in any college reading program:

1. A testing program including —
    a. Survey testing, which will serve as screening for certain groups of students, such as, freshmen, upper classmen, students from various schools (business, law, theology).
    b. Initial individual testing, which would include formal and informal reading tests, mental tests, visual test, personality tests, etc.
    c. Terminal testing with appropriate measure.
2. A program of interviews, including initial interviews, interviews at various times during the reading work, and finally an appraisal of the work and its effectiveness with the in-

dividual student.

3. Systematic instruction and practice based on the findings of tests and interviews. In general, this should include detailed and specific instruction and practice on the following general areas:
   a. The psychology of reading.
   b. The adjustment of rate to purpose and material.
   c. The improvement of comprehension through reading for specific purposes such as reading for the main idea, reading for detail, reading to follow directions, reading to draw conclusions, reading to interpret, reading to criticize, etc.
   d. The improvement of vocabulary, including work on word recognition skills, syllabication, roots, affixes, individual dictionaries, etc.
   e. The improvement of organizing, outlining, and summarizing, including attention given to the outline form, paragraph patterns, paragraph function, and the use of writing techniques as an aid to comprehension.
   f. The improvement of study skills, including work on the SQ3R formula, time scheduling, preparation for and taking of examinations, use of the library, etc.
   g. The improvement of reading in content fields, giving instruction and practice in use of test-books from science, mathematics, social studies, and English (specific help on how to read the novel, drama, essays, poetry, etc.).
   h. The improvement and refinement of individual and personal reading.

Once the organization of the reading program has been determined, the next question is how to administer it. The practices in administering college reading programs vary widely. Many factors contribute to this variation, namely, the size of the school, the needs of the particular college or university, the preparation and background of the person who organizes the reading work, the number of students and instructors involved in the program, the attitude of administrators and faculty members, the available space and equipment.

Once the need for a reading improvement program has been felt and the organization of the work accomplished, the administration will likely follow one of several well established patterns. Reading programs, as they have developed and are developing in American colleges and universities today, seem to fall into the following general categories:

1. The English-reading class pattern. In this pattern English instructors assume the chief responsibility for improving reading skills, usually of freshmen. In some cases, the studens who scored within the lowest quartile on certain standardized tests are required to take the course.
2. The communication arts patterns. In this pattern the improvement of reading is an integral part of a basic course required of all students.
3. The orientation pattern. The orientation programs of some schools are quite elaborate and detailed, including improvement of basic reading skills, use of the library, etc.
4. The reading clinic, or laboratory, pattern. In a number of colleges and universities the reading clinic, or reading laboratory, serves the needs of the school through both group and individual services.

In summary then, there is, and always has been, need for improving the reading skills of college students. Today principles are valuable which serve to assist in the establishment of these programs. Many studies and experiments on various phases of the college program have been reported in detail. Finally, college reading programs have been successfully carried on to the extent that we now have several well-established patterns of administration.

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PART II

SECTIONAL REPORTS

GROUP A

ORGANIZATION AND ADMINISTRATION OF COLLEGE READING PROGRAMS.

Chairman: Dr. Henry P. Smith: University of Kansas.
Discussants:
Mrs. Dorothy Bracken: Southern Methodist University.
Dr. David McAllister: Arkansas Polytechnic College.
Miss Lois De Figh: University of Tulsa.
Dr. A. J. Pellettieri: University of Houston..

PROBLEMS INVOLVED

Dorothy Kendall Bracken
Southern Methodist University

In considering the problems involved in the organization and administration of college reading programs it might be well to consider (1) the need for such programs, (2) the criteria by which a sound program may be judged, (3) the organization of reading programs, and (4) some general patterns of well-established college reading programs.

The need for continuing reading instruction at the college level is well known. Consider the standardized test scores of college freshmen whose rank placed them in the upper 50 per cent of their graduating class in high school. Of 784 freshmen tested in one university, on the Iowa Silent Reading Test, 384 scored below the 50th percentile, 229 falling below the 30th percentile. From a small freshman class which entered at midterm the scores on the same standardized test showed that from a total number of 97 students, 28 ranked above the 50th percentile and 67 ranked below, 34 falling below the 25th percentile.

Even graduate students often showed marked deficiencies in reading skills. One class of second and third year theology students exhibited a wide range of reading ability—from eighth grade to twenty-ninth grade reading levels. In this same group eleven scored above the sixteenth grade in reading comprehension and vocabulary, but nine of the eleven fell below the 25th percentile on rate of comprehension.

A brief glance at some reading scores by adults who have been out of school for several years might suggest that the need for college programs has long been a real one. When rate of comprehension test were administered to widely scattered groups and to men and women from various businesses and professions, the following results were obtained: (The median for college graduates on this test is 23.5.)

1. Insurance executive group — median 16.2
2. Other executives — median 17.5
3. School administrators — median 18
4. Graduate students — median 23

In setting up college reading programs to meet the developmental, as well as remedial, needs of students, it is important to consider the criteria underlying a sound reading program. Dr. Grays believes:

1. A valid reading program is directed by two closely related purposes. . . . the personal and social development of the student, also . . . the various types of understandings, attitudes, and skills needed in achieving the broader ends sought through reading. . . .
2. A valid program recognizes that reading is only one of many aids to learning now available and co-ordinates the use of reading and other forms of experience in achieving specific ends. . . .
3. A valid reading program is an all-school or college program and involves the hearty support and creative effort of all staff members. . . .
4. A valid reading program is continuous and moves forward progressively in harmony with the dominant characteristics, interest, and needs of students.
5. A sound reading program is flexible and can readily be adjusted at each level of advancement to wide variations in the characteristics and needs of students. . . .
6. A valid reading program provides a wealth, variety, and range of difficulty of suitable reading materials. . . .
7. A valid reading program provides a stimulating setting in which reading can function effectively. . . .
8. A valid reading program includes provision for continuous appraisal of the effectiveness as a whole and of its various

aspects (1, pp. 58-64).

On the same topic, Dr. Strang writes that despite waried approaches the best procedures have certain principles in common:

1. The student should feel a need for improving his reading and take responsibility for making and carrying out an appropriate individual program for improvement.
2. The need for learning to read more effectively arises most naturally out of interest and valuable school and home activities and out of vital interests of individual students. Adjustment should be made in the total school program for needed instruction and practice in reading.
3. Difficulties that are interfering with a student's reading efficiency must be discovered and specific steps must be taken to correct them.
4. Each class is a reading laboratory, in which the reading attitudes, interests, and abilities required for success in the subject should be developed and suitable reading materials made easily accessible.
5. Special instruction and practice in reading to be functional must be geared into the daily reading jobs that individuals have to do or ought to do (2, p. 29).

Organized reading programs based on valid criteria or fundamental principles such as Gray and Strang sugest offers real challenge. If one accepts these lists as principles upon which procedure is established, then one must include the following items in any college reading program:

1. A testing program including —
    a. Survey testing, which will serve as screening for certain groups of students, such as, freshmen, upper classmen, students from various schools (business, law, theology).
    b. Initial individual testing, which would include formal and informal reading tests, mental tests, visual tests, personality tests, etc.
    c. Testing with appropriate measure.
2. A program of interviews, including initial interviews, interviews at various times during the reading work, and finally an appraisal of the work and its effectiveness with the individual student.
3. Systematic instruction and practice based on the findings of tests and interviews. In general, this should include detailed and specific instruction and practice in the following general areas:
    a. The psychology of reading.
    b. The adjustment of rate to purposes and material.

c. The improvement of comprehension through reading for specific purpose such as reading for the main idea, reading for detail, reading to follow directions, reading to draw conclusions, reading to interpret, reading to criticize, etc.

d. The improvement of vocabulary, including work on word recognition skills, syllabication, roots, affixes, individual dictionaries, ect.

e. The improvement of organizing, outlining, and summarizing, including attention given to the outline form, paragraph patterns paragraph functions, and the use of writing techniques as an aid to comprehension.

f. The improvement of study skills, including work on the SQ3R formula, time scheduling, preparation for and taking of examinations, use of the library, etc.

g. The improvement of reading in content fields, giving instruction and practice in use of test-books from science, mathematics, social studies, and English (specific help on how to read the novel, drama essays, poetry, etc.)

h. The improvement and refinement of individual and personal reading.

Once the organization of the reading program has been determined, the next question is how to administer it. The practices in administrating college reading programs vary widely. Many factors contribute to this variation, namely, the size of the school, the needs of the particular college or university, the preparation and background of the person who organizes the reading work, the number of students and instructors involved in this program, the attitude of administrators and faculty members, the available space and equipment.

Once the need for a reading improvement program has been felt and the organization of the work accomplished, the administration will likely follow one of several well established patterns. Reading programs, as they have developed and are developing in American colleges and universities today, seem to fall into the folowing general categories:

1. The English-reading class pattern. In this pattern English instructors assume the chief responsibiltiy for improving reading skills, usually of freshmen. In some cases, the students who scored within the lowest quartile on certain standardized tests are required to take the course.
2. The communication arts pattern. In this pattern the improvement is an integral part of a basic course required

of all students.

3. The orientation pattern. The orientation programs of some schools are quite elaborate and detailed, including improvement of basic reading skills, use of the library, etc.
4. The reading clinic, or laboratory pattern. In a number of colleges and universities the reading clinic, or reading laboratory, serves the needs of the school through both group and individual services.

In summary then, there is, and always has been, need for improving the reading skills of college students. Today principles are valuable which serve to assist in the establishment of these programs. Many studies and experiments on various phases of the college program have been reported in detail. Finally, college reading programs have been sucessfully carried on to the extent that we now have several well-established patterns of administration.

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ENLISTING FACULTY AID

David McAllister

Arkansas Polytechnic College

It is obvious that skillful use of reading as a tool is necessary for academic success in any subject. Instructors on the college level have generally depended upon other teachers to equip their students with all the necessary skills in reading, so, we often hear it said, "Why weren't they taught to read in the grades, or in the high school?" While such statements may be common, the expectation that students entering classes in freshman science, for example, will be able to read that subject adequately is based upon a false conception of the processes of reading. A person does not learn to read once and for all in any one grade, however competent the instruction and complete the materials. Different levels of school and different subjects demand varying skills in reading. We cannot justly expect our freshmen to use accurately the Oxford Dictionary, although we expect them to be able to use a dictionary.

To some extent the improvement of reading on the college level is a projection upward of the work on the elementary school level. There is the same necessity for building confidence, for teaching methods of attacking words and thus increasing vocabulary, for sharpening comprehension, and for increasing speed.

The director of a program for improvement in reading usually deals with a relatively few students. What can he do to make all faculty members aware of what they, in turn, can do to improve reading? It is probably true that more can be done in a small college, where students are known to a large number of the faculty and contacts between the faculty and director are frequent. The problem is one, in part, of letting the faculty become aware of how improvement in reading can lead to greater comprehension of the different subjects.

I think that, without lessening the importance of any single subject in the curriculum, an instructor can do much to improve reading by these procedures:

An instructor can take time to familiarize students with their text and let them see illustrations, references, indices, and organization of the books that they will carry from place to place. This is a process of anticipating difficulties. He can show students the relation between his course and others, so that students do not look on each study as an isolated field of knowledge. As far as our facilities permit, we can all provide lighting and physical conditions for proper eye hygiene. We can all know something about the processes of reading: the mechanics, the psychology, the outcome desired; the amount of print on those topics is unlimited. Every instructor can learn to recognize defects in students' reading and can refer an individual student to the proper source of help for him. A great deal can be done to improve reading if instructors will take time to teach desirable methods of study and especially if instructors will teach the vocabulary of their various subjects and of individual lessons. Each subject in the curriculum has its own reference books; do students of that subject know how to use those tools? Can they find quickly what they want in the library? The library is the very center of the program of instruction of any institution. When faculty members suggest books for purchase by the library, do they select books of varying degrees of difficulty so that students of varying degrees of ability can all find something to read about an assigned topic?

Here, I think, is a great chance for the director to influence the faculty, by publicizing the many authoritative books on many topics now available. In the study of atomic structure, for instance, let an instructor compare the text of the **Picture Book of Molecules and Atoms** by Jerome Meyer or **Atoms in** Action by George Harrison with the class textbook. Let the instructor note the validity of those books, their ease of reading, and the quality of their illustrations. Such books can help fill in the student's background better than a textbook, which is essentially an outline. Such books may serve as easy introductions to the subject. The use of various levels of writing may make easier the comprehension of a topic for those students who are accustomed to picture clues. In selecting such books, the faculty needs to be shown those sources of books which are usually as accurate as the textbook, but on easier levels. The director may help by listing sources such as publishers' catalogues, The English Journal, Books for You, published by the National Council of Teachers of English. These are sample sources of titles. A librarian can explain their use and can suggest other sources.

In enlisting the aid of faculty in improving students' reading, the director may build up a concept of a desirable program, one which has a purpose: the rehabilitation of persons so that they can deal confidently with their studies; a concept that recognizes that devleoping skill in reading is closely associated with developing skills in other areas of language (listening, speaking, writing); and a concept that looks on reading as a necessary activity of an educated person.

Much of the work of the director is concerned with interpreting the program to the whole faculty. There is the problem of letting the faculty become aware of the great range of invidual differences present in any class and of the implications of those differences for subject matter and methods of teaching. There is, too, the problem of the superior learner: How is he to be identified, and how shall the content be adjusted to his capabilities? Through analyses of results of standardized tests and acquaintance with the records of students, the director may serve in effecting more efficient teaching and learning. The faculty may learn, also, that no single factor is responsible for poor reading.

How can the director reach faculty members? Perhaps through informal talks with individuals or with small groups such as the instructors of freshman English or of the social studies. Sometimes the director may describe his work — its purposes, facilities and methods — by bulletins to the whole faculty. He may reach some instructors through special offices such as the guidance bureau or the deans of men and women. A display of the machines with demonstrations of their use may help. There can be some publication, perhaps mimeographed, which describes the students statistically and lists specific results from the classes. The faculty might benefit from attending the reading sessions and from working out the same exercises given to the students.

I do not think we may expect any lessening of the number of freshmen who need help in reading. The over-crowded high schools and the general lack of programs on that level for improving reading together with the outmoded curricula in English and inadequate library resources, all point toward a continuing and increasing need for remedial reading. When the faculty is not conscious of those conditions and of their implications for the various subjects, it can be the responsibility of the director to publicize the facts. The concern of the faculty for their various subjects can be a starting point to improve students' reading.

An attack on poor reading, vigorously carried out by the whole faculty, can highlight difficulties for the whole class without singling out individual students. When reading is stressed in different courses, students may regard reading as a necessary tool in learning and may see methods of improving their use of the tool. The amount of reading may be increased.

In our attempts to influence the faculty, let us not forget our valuable ally, the librarian. The librarian would like to have persons who can competently use the files and the reference books and persons who will now and then read a book for the fun of it.

In summary, then, the work of the director of the program for improvement of reading is much furthered if he can enlist the aid of the whole faculty. The enlisting of such aid is a slow process, but one which becomes easier as the faculty sees that increased skill in reading and study are reflected in the comprehension of the different subjects.

RECORDER'S REPORT

Henry P. Smith
University of Kansas

The discussion was opened with papers by Mrs. Bracken on Organizing and Administering Programs and Dr. McAllister on Enlisting Faculty Aid. Mrs. Braken summarized data from studies of adult reading abilities and suggested that four points should be considered in the planning of a college reading program: (1) the present status and reading needs of the students, (2) the methods to be used for judging the effectiveness of the program, (3) the general patterns of organization that have been found effective in other schools and (4) the specific organization most suitable to the physical facilities and budget that are available for the program. She reported that there are four general types of college programs: (1) the program in which the teacher of English gives special help to needy students; (2) the communication-arts integration, with reading a part of the general communication program; (3) the orientation pattern in which training in reading is combined with training in library usage and other techniques; and (4) the reading laboratory or clinic pattern, with a training program for college students one part of a general reading service offered to elementary school and high school and adult groups.

Dr. McAllister pointed out that responsibility for reading improvement could be shared with the members of the regular instructional staff. He felt that this approach was most likely to succeed in a small college. He took the position that there was much that could be accomplished by enlisting the interest and aid of fellow faculty members, particularly in those areas where a study type of reading was needed. He added that when instructors are aware of the background deficiencies and reading disabilities of students they often are eager to make adjustments for individual differences. Such instructors can suggest easily read books that contribute to general background knowledge, and they are likely to make better assignments by helping students see the importance of certain vocabulary terms by teaching special skills needed for understanding the graphs or tables, and by helping students see the place of the reference materials. He suggested that our overcrowded high schools, out-moded English curricula, and lack of high school reading programs guaranteed that college students would need special help in reading for many years to come.

Dr. Pellettieri discussed the many services of the University of Houston reading program and indicated that industrial organizations in that city were participating in programs designed to increase reading rate. He indicated that a wide variety of mechanical equipment was used in these programs. Miss DeFigh discussed the type of organization and procedure that University of Tulsa had found most effective in reading programs designed for adults.

The chairman reported that the reading program at the University of Kansas concentrated on improving general study skills and emphasized the work type of approach in reading. He suggested that the goal of reading improvement was the development of a flexible approach rather than speed. He felt that most students need help in setting up a study plan that includes regular review periods and that they need to be shown the effectiveness of recall as a regular part of their study procedure. The taking and using of notes and the specific skills required for reading graphs and tables are among the study techniques emphasized in the program.

GROUP B.

DIAGNOSTIC TECHNIQUES IN COLLEGE READING PROGRAMS

Chairman: Dr. Margaret Rouse, Texas Christian University.
Discussants:
Mrs. Dorothy Cantrell, Arkansas State Teachers College
Dr. Tandy W. McElwee, Louisiana State University.
Dr. Arthur Heilman, University of Oklahoma.
Dr. George D. Spache, University of Florida.

PROBLEMS INVOLVED

Dorothy Cantrell
Arkansas State Teachers College

"Diagnostic techniques" is a term that can be applied to the methods of appraising reading in a number of situations. It may be (1) the initial procedures of determining the reading abilities of a large group of students; or (2) the techniques used in studying the individual entering the clinic or laboratory; or (3) those methods used in the continuous process of appraisal of growth in reading. In cases of difficulty or disability in reading, the term "diagnostic techniques" may apply to:

1. Techniques used to diagnose the reading weaknesses, or
2. It may refer to methods of study of a total problem, of which reading disability is a factor.

The procedures discussed below are most often used in measuring and studying symptoms of disability, and in determining causes of the problem.

The reading process is so complex that a specific factor cannot be said to cause reading difficulty; there is not designated place on a reading scale at which a person can be said to be handicapped in reading. Because of this, selection of students for assistance in the improvement of reading is difficult at times. Common ways to locate students needing help are: (1) those who score in the lower deciles on general reading tests; (2) self-referral on a voluntary basis; and (3) referral by instructors or counselors.

Whether the selection is made on a voluntary or a restricted basis, the diagnostician begins with a study of general factors, gradually working to the more complex details and then to an interpretation of the difficulty in terms of the over-all picture of the individual. He finds it necessary to use a number of techniques, although procedures may vary from person to person and may include both formal and informal appraisals.

Analyzing the aspects of reading with which the individual has difficulty is perhaps one of the first approaches. Most general survey reading tests cover comprehension, vocabulary, and rate. Further analysis includes a study of such skills as:

(1) Survey reading, (2) Critical reading, (3) Interpretative reading, (4) Ability to organize, (5) Word analysis.

Testing enables one to gather information in an objectvie and standard manner in a number of areas affecting reading achievement. Tests of study habits, vocational preferences, personality, and intelligence provide information about basically related factors. A point to be considered in the choice of standardized tests is the degree to which they depend on reading ability. Particular care should be exercised in the case of any tests which are timed. The particular tests chosen again depend upon the goals, staff, and budget for the reading program.

Referring the student to specialists for vision, hearing, and speech tests, and for a thorough physical examination is a necessary step in the diagnostic program. The more elaborate programs maintain provisions for vision and hearing tests, but in many instances referral to a specialist is more desirable. The report of the specialist then becomes a part of the data on the individual being studied.

Studying the cumulative record aids in identification of background factor in school or home which may relate to the total personality of the individual, and in turn to the reading problem. School history, medical history, and some family history are available in this manner, and informaton to aid in establishing rapport at the personal interview may be secured.

Interviewing provides the opportunity for the informal gathering of related data. Outgrowths of the interview may be the establishment of rapport with rleation to the reading problem in particular, the student's understanding of services offered, and self-analysis of his difficulties. Self-study and realization are important to motivation and improvement and should most probably be handled by the trained counselor or a person other than the one with whom the individuals works in the laboratory or clinic. Other factors such as speech and attitudes can be observed, and information on interests, extracurricular activities, and aspirations can be secured. If the data has been carefully studied up to the interview, gaps or weak areas in the information can be supplied or studied at the time of the interview.

All of these diagnostic techniques in reading are recommended with certain assumptions. It is assumed that a program of diagnosis is a planned part of the reading program. While diagnosis may vary in level from general survey to the highly refined, scientific analyzation, the fact remains that the reading program can serve the individual only to the extent his difficulty is understood. A second assumption is that the program of diagnosis is in keeping with the needs of the school. Goals of the reading program, available personnel, and allotted budget are factors surely affecting the procedures used in diagnosing reading. A last assumption made is that techniques used in the diagnostic program fulfill a need, and the results are used in the remedial or laboratory work.

The reading diagnostician uses a number of techniques for studying the elements in reading disability. A definite, final diagnosis is not made; rather, diagnosis provides a springboard for the work ahead and becomes a part of the continuous appraisal of reading growth.

RECORDER'S REPORT

Albert J. Kingston, Jr.
Agricultural and Mechanical College of Texas

Group "B" was concerned largely with an informal discussion of "Diagnostic Techniques." All of the discussants agreed that the topic was too broad to enable concise conclusions. Mrs. Dorothy Cantrell indicated that the term "diagnostic techniques" may be applied to (1) the initial procedures employed to determine the reading abilities of a group of students or (2) the methods employed to study the individual and his reading skills. In order to avoid confusion, the discussion was limited to a use of the term in the sense of study of the individual student. Mrs. Cantrell emphasized that diagnosis should be a planned part of the reading program. She stated that the diagnostician should attempt to get an over-all or general understanding of the individual rather than to confine himself to an examination of separate individual factors. Mrs. Cantrell also emphasized that diagnostic techniques should consist of both formal and informal methods. Among the techniques she mentioned were informal analysis of skimming, word attack, and critical reading; testing, including the use of both standardized and tailor-made tests, the examination of cumulative records and other data, and intensive interviewing. She also discussed the need for referring the student to specialists when additional information is needed. In concluding, Mrs. Cantrell stated that diagnosis should not be something that is done at the time a student begins remedial training and then forgotten; she felt that rather it should be a continuous process.

Dr. George Spache stated that in no single area of diagnosis, i. e., visual, physical, mental, etc., has diagnosis been integrated with remedial training to the degree it should be. He illustrated his belief by describing how most reading specialists, suspicious of a visual impairment in a student, refer the student to an eye specialist and then fail to follow up, feeling that they can forget about the case. Spache feels that one of our failures is that we do not implement our diagnostic techniques to the extent we should. McElwee and Heilman agreed with this opinion. Dr. Spache also emphasized that no single diagnostic technique is sufficient; all could be improved. He agreed with Mrs. Cantrell's opinion regarding the need for viewing the total personality of the individual, and he observed that in some diagnosis there almost seems to be a reversion toward the concept of "faculty psychology."

Both Mr. McElwee and Dr. Heilman expressed their agreement with the other discussants and briefly elaborated on their methods of diagnosis.

GROUP C

PROGRESS OF STUDENTS DURING TRAINING PERIOD. RETENTION OF GAINS

Discussants:

Mr. Louis E. Harris, Oklahoma State College for Women
Mr. David D. Hunt, Humble Oil Company
Dr. Ralph Staiger, Mississippi Southern College
Dr. Paul Berg, University of Florida

PROBLEMS INVOLVED

Louie Harris

Oklahoma State College for Women

The amount of progress made by students in reading improvement courses as revealed in journal articles and in reading conferences is reported by comparing reading scores determined at the beginning of courses with scores made at the end of the course. Reports by Jackson (1), Smith and Tate (2), Causey (3), and Sheldon (4), among a number of others, are illustrations of reports of this kind.

The instruments of measurement vary widely as do the procedures and techniques of instruction used in courses. Particularly apparent is the variation in length of courses both in terms of hours spent and number of weeks allotted to courses. Pellettieri (5) reported in a summary of a survey made in 1954 of twenty-eight colleges and universities that the courses varied in length from seven to eighteen weeks and that the number of hours spent in courses showed a range of ten to sixty-four. The range for numbers of meeting per week reported was from one to four.

The results reported in improvement of reading ability and the rather wide differences in amount of time reported given to courses suggests to reading specialists the need for information relating to progress made by students at intervals during the course. These results also suggest a need for comparison of progress made by students in shorter courses with that made by students in a course with the same objecives and procedures extending over a longer period. A need also exists for information relating to progress made at different periods in the same course wnen the course is one quarter or one semester in length.

In an attempt to get data relating to the extent of progress at different intervals in courses one semester in length, an analysis was made at Oklahoma State College for Women of reading scores of 125 students at mid-semester and compared them with scores at the end of the semester.

The scores used were obtained by using the "comprehension-rate formula" which provides for a reading score obtained by multitplying the comprehension score by the rate in words per minute and dividing the result by 100. The progress made by students was 22% higher during the second half of the semester than during the first half.

Several factors were involved that caused the gain to be greater during the last half of the course. (1) Time was required to acquaint students with the details of the procedures to be used. (2) Time was required to establish objectives of the course and to get students to accept and understand the objectives. (3) Since improvement of reading skills, like improvement of other skills, comes largely from correct practicie of tested procedures, the proficiency of the student in using the procedures is increased as he continues to follow the procedures.

The larger gains during the second half of the course reported above may be due, in part, to the plan of the course which is indicated in the following paragraphs:

1. Although comprehension is never lost sight of, the first consideration in working with a student is to increase the student's rate of reading to the point that outside interferences in reading are eliminated. Low comprehension is permitted during the first half of the course as long as rate improves. The objective is to overcome inertia on the part of the student, which is essentially resistance to change of reading habits. The critical point is usually reached at about eight weeks, after which comprehension scores rise and the speed of reading remains at the point to which it was raised.
2. Exercises and vocabulary building are introduced as laboratory or homework to be done in addition to the three

hours of practice in the reading laboratory. The objective of this work is to create and sustain an interest in words and their meanings.

3. In the directed reading aspect of the course, materials are varied according to difficulty and the student is encouraged to read materials which will require a change of pace. Some instruction in skimming, reading for a fixed answer, and critical reading is given. The reading pacers are used part of the time, and the student is expected to do at least half of his reading in the laboratory without the pacer. Sometimes the pacer is used as a timer. This usually occurs after the first ten hours of practice.
4. At the end of the course, all of the skills presented are integrated and the student is encouraged to use textbooks and any other materials which are read in class in the reading laboratory.

Motivation of students is obtained as follows:

1. By giving the subject success rapidly.
2. By developing his attitude favorably toward reading.
3. By keeping the reading practice as close to a normal reading situation as possible. When a mechanical device is used, immediately after this exercise reading is done without mechanical stimulation.
4. By encouraging plenty of practice.
5. By setting the goal for a high gain.
6. By giving individual consultation and guidance.

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RECORDER'S REPORT

Ralph Staiger

Mississippi Southern College

Group meeting "C" was concerned largely with the discussion of two reports, one by Mr. Louie Harris of Oklahoma State College for Women, and the other by Mr. David Hunt of the Humble Oil Company. Many comments and observations were made about these studies, and, as is natural in a group discussion, several side issues were discussed and explored.

Mr. Harris represented a study conducted at Oklahoma College for Women. A study of one hundred twenty five students was made which compared the progress of students at the end of the first half of an eighteen-week course with gains made by the end of the course.

Using informal tests on reading materials derived from **Hawthorne's Tales**, the results of two nine-weeks training periods of roughly twenty-five clock hours each were compared.

The study revealed that the gain in reading scores in the last nine-week period was 22 per cent greater than the gain in the first nine-week period.

There was a discussion of the "reading score" concept which was used in the study. This reading score is something like a production equivalent or, in baseball parlance, a batting average or a runs-batted-in score. It is computed by multiplying the rate in words per minute by the comprehension score and dividing this product by one hundred. Therefore, it can be expressed in the following formula:

$$\text{Reading score} = \frac{\text{Rate in words per minute X comprehension}}{100}$$

It was understood by Mr. Harris that this score might not be considered statistically sound, but he held that its use was justified for want of a better concept which would express a person's reading ability in terms of both rate and comprehension.

Mr. David Hunt of the Humble Oil Company presented data on the retention of reading gains which resulted from the courses given to adults in the Humble Oil Company. This industrial program, he said, is quite different from a college reading program, for the "students" had all of the characteristics of college students, together with all the characteristics of prima donnas. They were members of the middle and upper levels of management in the company, assured of their futures, and extremely busy people. It was quite difficult for them to spare the time to take the course.

The course itself lasted for ten weeks with two sessions per week of one and one-half hours each. Work was done with tachistoscopic training, the Harvard Reading Films, the Speed Reader (a variable rate controller),, and the S.R.A. Reading Accelerator. The Survey Section of the Diagnostic Reading Test was administered at the beginning of the course, at the end of the course, six months after the course ended, and one year after the course ended. Data were presented on three groups of 20 students each. Only one of the groups has had the test after one year, and two of the groups have had the six-months test. (See table on page 100).

It can be seen that although there is a drop in rate, comprehension, and reading score six months and one year after the initial increase, there is still a considerable increase over the beginning reading score. In several months data on Group No. 2 after a year, and Group No. 3 after six months will be available. It will be interesting to see whether these groups maintain the same pattern.

Captain Norman Goodwin of the United States Air Force Reading Laboratory presented information on the retention of rate increase, or maintenance of rate gain, which his laboratory has achieved. After twelve months 78 per cent of the gain was retained. After twenty-four months 82 per cent of the gain remained.

In a general discussion of industrial reading programs Dr. Paul Berg of the University of Florida made the observation that before an industrial reading program designed to improve the on-the-job reading skills of supervisory employees can be effective, a job analysis of the reading done by these men must be made, so that the training will take the proper direction.

Evaluation of Reading Improvement Training
Six Months and One Year After Courses
Humble Oil and Refining Company

	Course		Increase Over Beginning		6 Months After Course	Increase Over Beginning		1 Year After Course	Increase Over Beginning	
	Beginning	Close	w.p.m.	%		w. p. m.	%		w.p.m.	%
Group No. 1										
Reading Rate - w.p.m.	273	495	222	81.5	390	117	43.0	350	74	26.8
Comprehension - %	72.5	84.8	-	17.0	80.0	-	8.9	82.0	-	11.9
Reading Score	197.9	419.8	-	112.1	312	-	57.8	287.0	-	41.7
Group No. 2										
Reading Rate - w.p.m.	307	522	215	70.0	433	126	41.0	-	-	-
Comprehension - %	70.0	83.5	-	19.3	76.2	-	8.9	-	-	-
Reading Score	214.9	435.9	-	102.8	329.9	-	53.5	-	-	-
Group No. 3										
Reading Rate - w.p.m.	271	511	240	89.0	-	-	-	-	-	-
Comprehension - %	76.2	85.5	-	12.2	-	-	-	-	-	-
Reading Score	206.5	436.9	-	111.6	-	-	-	-	-	-
Average										
Reading Rate - w.p.m.	280	506	226	80.7	407	120	41.8	350	74	26.8
Comprehension - %	73.3	84.6	-	15.4	78.3	-	8.9	82.0	-	11.9
Reading Score	205.2	428.1	-	108.6	318.7	-	54.2	287.0	-	41.7

December 1, 1954

GROUP D

METHODS AND TECHNIQUES IN IMPROVING READING ABILITY.

Chairman: Mr. George E. Mutch, New Mexico Military Academy.

Discussants:

Oscar S. Causey, Texas Christian University
Dr. Elsie Dotson, University of Texas
Dr. George Beamer, North Texas State College
Dr. J. V. West, Hendrix College

PROBLEMS INVOLVED

Oscar S. Causey
Texas Christian University

Some major premises should be stated as a basis for consideration of methods, techniques, and procedures used in improving reading ability of college students.

(a) The teacher will have adequate knowledge of the psychology of reading.
(b) The specific objectives of the course will be determined before the beginning of the course and will be presentd to the students at the beginning of the course.
(c) Methods, techniques, and procedures will be adopted that offer greatest promise of success in bringing the students to a realization of the objectives at the end of the course.
(d) Students will be tested at the beginning of the courses and each student will be given his status in terms of the objectives of the course.
(e) Students will be tested at the end of the course to determine progress made toward realization of the selected objectives.
(f) The college or university administration will have provided adequate equipment, materials, and space.

The primal factors in improvement of reading ability of college students are timing and motivation. Timing, the first named factor, supplies a considerable measure of the second-named factor — motivation. The two are found moving together. The procedure will reveal to the student quickly his success in increasing his scores in terms of the two basic objectives, namely, comprehension and rate of comprehension. Success from day to day in improvement of these scores sustains motivation.

Establishment of confidence on the part of the student that his reading ability can be improved regardless of the level at which he is reading at the beginning of the course provides motivation. A trained and experienced teacher can say to a group of students in a reading improvement course without fear of successful contradiction, "You can improve your reading ability in this course if you want to do so." Teacher confidence generates student confidence.

Weber (1) points out that,

> "The best way to develop both **speed and comprehension** in reading is to center intelligence and attention on the printed material so forcefully that every external distraction or inner wayward thought will be excluded. Slow reading is to a considerable extent the expression of inveterate habit, to be overcome by persistence in reading rapidly. Reading exercises are timed, not for the purpose of scoring them, but to remind the student that time is passing. At first, the very attempt to concentrate more fully and read more rapidly will be distracting. But if one persists in striving for greater speed and clearer understanding while reading, he will in time establish faster tempo as a new habit."

Timing the reading aids in establishment of sustained attention. Students report frequently, "My eyes move on down the page after my mind goes off on something other than the thoughts on the page." Timing is an effective method to use in eliminating this habit.

The chief values of reading pacers, tachistoscopes, 16 mm films and most of the other reading laboratory gadgets are in the provision they make for timing and motivation. The persons who are adversely critical of the use of instruments in improving reading ability of college students appear to be uninformed in the psychology of reading and think that rate is something apart from comprehension. In the use of the word reading in its true sense there is no comprehension apart from the rate at which comprehension takes place.

Self scoring of comprehension, rate of comprehension and work done with the tachistoscope is effective in maintaining motivation. If the student uses a daily work-record sheet provided in his workbook he makes a record at the end of the period showing for that day the number of pages read, percent comprehension, rate of comprehension in words per minute, setting of reading pacer if pacer was used, reading score, initial reading score, and percent gained to date. At the beginning of the succeeding period in the laboratory he reviews the daily work record sheet and sets as his immediate objectives the raising of all scores and records made during the preceding period. Thus, each day's work becomes a step in a continuous process of improving his reading ability. The fact that the student knows at all times the amount of progress made gives him initiative in maintaining the success pattern.

Vocabulary enlargement by systematic use of carefully chosen procedures should be a part of every good college reading improvement program. The development by students of the "four dimension concept of a vocabulary" is suggested as an initial step. The four dimensions are length, breadth, depth, and time.

Length is the number of words for which at least one meaning is known.

Breadth may be said to be the number of different meanings one knows for the words he knows. For example twenty-three meanings are given in the dictionary for the word **read. Expression** has seven meanings. **Run** has fifty-one meanings.

> According to DeFigh, (2) "Depth of vocabulary is a much more subtle phase of the process than the first two and has its place at the higher levels only, after a firm foundation for it has been established in the two phases previously discussed. In this aspect we must consider vocabulary as it expresses mood, qualification, degree, implication, association, and figurative meaning. This phase of language development, perhaps more than the others, builds an appreciation of the richness of our language. Figurative

language should not be restricted to the reading of fairy tales, poetry and legends of childhood. We must not overlook the opportunities offered in the study of idioms, satire, irony, and nonliteral language as we work with students at the higher levels."

"They need to feel the undertones, to sense the bias, the exaggerated, the playing of one understanding and the minimizing of another, through clever choice of words. They need to recognize the emotional appeal, the sarcasm, the 'goody-goody' overplay that one encounters so frequently in materials meant to propagandize, to exert pressure, and by such means seek to control the thinking of the reading.

The prereading-reading-rereading procedure is effective in reading practical prose. This technique should not be used in reading fiction or poetry.

Prereading, which is a form of skimming, is done by reading the first one or two paragraphs, the first sentence in each succeeding paragraph and all of the last paragraph. Judson (3) points out that,

> "Prereading makes comprehension easier and higher, because it provides you with a framework into which to fit details during your later thorough reading. Consequently, the more difficult the material is, the more prereading will help comprehension. Prereading provides an advance sampling of the author's style and content, making it easier in subsequent thorough reading to maintain the most efficient reading speed — that is, the highest speed at which you can obtain the desired degree of comprehension."

Prereading indicates to the reader the direction of the thinking of the writer in advance of careful reading.

Immediately after prereading, the selection is read thoroughly and as rapidly as possible either with or without reading pacers but without making notes or underscoring important passages. Note-taking, underlining and summarizing is done only after the thorough reading.

Measurement of results of this procedure in classes with approximately twenty-five students enrolled reveals a change in the reading pattern to a higher comprehension and a higher rate of comprehension.

Tachistoscopic techniques have been quite thoroughly evaluated by Sommerfeld (4) in a ninteen page report with forty-four bibliographical references.

The use of 16 mm reading films has been favorably reported by Eller (5).

The textbook — reading laboratory method provides for transfer of gains made in laboratory practices to use in textbook reading. Students may become "conditioned" in following laboratory plans and procedures and find that they read much less effectively outside the laboratory or clinic, particularly when reading improvement courses are only a few weeks in length with one or two meetings each week. Workbooks and other materials usually selected for use in reading improvement courses frequently are not comparable to reading materials in college textbooks.

Two or three times each semester, a week is designated as "textbook week" in the reading courses at Texas Christian University. During the week preceding "textbook week" an assignment is made for reading **How to Use a Book** (6). Students bring textbooks of their own choosing on the following week — fiction and foreigin language excluded. (Reading of fiction is presented as a different problem.)

Two class periods are spent in discussing effective use of textbooks. This is followed by familiarizing students with a procedure for self-scoring while textbooks are in use both in the laboratory and outside. The prereading-reading-rereading technique is used part of the time during "textbook week" and students are instructed to use it during study periods outside the laboratory. Reading pacers are used approximately one-half of the time during "textbook weeks."

Counseling is reported to be an important means of improving reading ability by bringing about emotional adjustments. In an article on emotional problems in reading Dotson (7) poses the question, "Since reading can, and does, mean so much to each of the persons coming to our reading clinics, what can we do to help insure that his experience in the program might be a therapeutic one without giving therapy?"

Later in the same articile she says, "In many instances, reading programs serve only to recondition a person — that is, to associate pleasure with reading rather than fear or discomfort."

Ephron (8) reports improvement of reading by use of therapy and gives the procedures used in the form of several case studies.

An urgent need exists for more research and experimentation in the area of reading methods.

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3. Judson, Horace, **The Techniques of Reading**, Harcourt, Brace and Company, New York, New York, 1954. p. 19.
4. Sommerfeld, Roy E., "An Evaluation of the Tachistoscope in Reading Improvement Programs," **Third Yearbook of the Southwest Reading Conference for Colleges and Universities**, Texas Christian University Press, ort Worth, Texas, 1954. pp. 7-25.
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7. Dotson, Elsie, "Emotional Problems in Reading," **Third Yearbook of the Southwest Reading Conference for Colleges and Universities**, Texas Christian University Press, Fort Worth, Texas, 194. p. 48.
8. Ephron, Beulah, **Emotional Difficulties in Reading**, The Julian Press, 1953.

RECORDER'S REPORT

Captain George E. Mutch

With a central topic of "Methods and Techniques of Improving Reading Ability," the participants of Group D maintained a wholesome and challenging discussion of this huge subject. Within the principal theme of the Conference, "Evaluating College Reading Programs," the Group accepted the challenge, and, considering the range of reference, probed significantly into some of the major considerations and aspects of present-day methods and techniques of improving reading ability for college and university students.

The principal discussant of the Group, Professor Causey, had distributed to the participants and members a significant outline of topics around which the group rotated in their discussions. With these important and essential data before them, the group started to explore the structural dimensions and methods and techniques.

The major methods discussed were grouped under six headings, as follows: 1. Prereading, reading, re-reading, relatively similar to Survey-Q-3R; 2. Textbook-Reading Clinic or Laboratory; 3. The Reading Pacer method; 4. Reading Films, University of Iowa or Harvard University series or Controlled Reader; 5. Perception improvement in widening visual span; and, 6. The "Contract" proposing for the student to contract his aims toward essential improvement.

In proposing major techniques, consideration was given to the important values in 1. timing, 2. selfscoring, 3. development of ability to concentrate and study, 4. rereading, 5. Tachistoscopic training, 6. expansion in a four-dimensional vocabulary, and 7. strengthened motivation, as a success pattern in laboratory and clinic management.

With these methods and techniques outlined, the group then proceeded to weigh some of the major problems which lead toward the improvement of reading abilities.

Successful Reading Programs begin a course of training by making specific objectives known to the student as a pre-training announcement. Then, the student, knowing beforehand which areas in his development requires specialized instruction, the methods, techniques, and procedures are adopted that offer him the greatest promise of success in accelerating the students to the fulfillment of concrete objectives when they have completed the course. Reading tests are administered at the beginning of the course, and, in counseling and diagnosis of results, the students are encouraged to proceed with training to meet each one's specific needs. The instructor adopts methods, techniques, and procedures to provide maximum student-motivation throughout the teaching. At the completion of course-training, the students are re-tested to determine and evaluate progress, and these results are interpreted for he student to give him an insight and realization of his accomplishments in terms of the initial objectives.

Toward a successful achievement of these goals, the college or university administration should provide adequate materials and equipment. The most valuable of reading tools and aids in an improvement program are books, workbooks, and testing materials; a suitable timer accessible to all students, preferably an electric wall-clock with large dial and sweep hand; reading pacers readily available but never placed in "stalls" or booths; tachistocope; and reading films or controlled Reader.

This Group, with its provocative subject, attracted many members of the conference who joined in the discussions and made concrete suggestions. A number of contributions were made in the constructive evaluations of reading methods and teachniques.

APPENDIX

A REPORT ON COLLEGE READING PROGRAMS IN THE NATION

Oscar S. Causey
Texas Christian University

A survey was made by the writer in the spring semester 1950 to discover the extent of the development of reading programs in colleges and universities in the United States. The questionaire method was used.

268 replies were received from institutions in 42 states and the District of Columbia reporting data relating to such programs.

Table I gives the number of institutions by states and the number of students enrolled in each state.

TABLE I

State	Number of Institutions	Number of States
Alabama	2	480
Arizona	1	200
Arkansas	9	762
California	34	4511
Colorado	5	1610
Connecticut	3	202
Delaware	1	57
District of Columbia	1	51
Florida	4	927
Georgia	6	445
Indiana	9	3326
Illinois	14	1237
Iowa	6	753
Kansas	7	739
Kentucky	2	122
Louisiana	3	567
Maryland	1	25
Massachusetts	7	677
Michigan	13	2309
Minnesota	8	408
Mississippi	2	275
Missouri	9	482
Nebraska	2	510
New Hampshire	1	241

State	Number of Institutions	Number of Students
New Jersey	6	530
New Mexico	3	158
New York	15	1475
North Carolina	7	419
North Dakota	2	400
Ohio	2	1843
Oklahoma	10	1278
Oregon	4	795
Pennsylvania	16	1372
South Carolina	1	100
Tennessee	5	323
Texas	26	2630
Utah	2	656
Virginia	5	255
Vermont	1	No. of Students not reported
Washington	6	210
West Virginia	1	65
Wisconsin	4	241
Wyoming	2	210
Total	268	33,431

Twenty-four state universities are included in Table I. Table II shows the schools, departments or divisions in which the reading development courses were given.

TABLE II

School, department, or division	Number
Education	80
English	67
Psychology	36
Counseling and Testing	13
Education and Psychology	9
Reading	8
Guidance	7
Personnel	7
Communications	6
Language Arts	4
Liberal Arts	4
Community College	3

English and Guidance	3
Extension	3
General Studies	3
Humanities	3
Psychological Services	3
Freshman Orientation	2
Special Education Clinic	2
Special Services	2
Basic College	1
Basic Division	1
Evening College	1
Preceptoral Studies	1
Science	1
Speech	1
Speech and Psychology	1

118 institutions reported credit given for the courses. The amount of credit given varied from one quarter hour to three semester hours.

A directory of the institutions that reported is published on the following pages.

DIRECTORY OF COLLEGES AND UNIVERSITIES IN THE UNITED STATES THAT REPORTED READING IMPROVEMENT PROGRAMS FOR THE REGULAR SESSION 1953-54

(Illustration of abbreviated form used: Alabama Polytechnic Institute, Auburn, Alabama. Don F. Driggs, Director of Reading Program. Psychology Department. 120 students. 3 hours credit.)

ALABAMA

Alabama Polytechnic Institute, Auburn. Don F. Driggs. Psych. 120 stu. 3 cr. hrs.
Howard College, Birmingham. Dr. W. D. Murray and Mrs. Virginia Powell. Ed. 360 stu. 1 cr. hr.

ARIZONA

Phoenix College, Phoenix. R. C. Emery. Eng. and Guid. 200 stu. cr.

ARKANSAS

Arkansas A&M College, College Heights. J. W. Morris and Mrs. Katherine Moore. Eng. 170 stu. 1 cr. hr.
Arkansas College, Batesville. B. W. Jordan. Eng. 24 stu. no cr.
Arkansas Polytechnic College, Russellville. Dr. David McAllister. Ed. 100 stu. no cr.
Arkansas State Teachers College, Conway. Miss Jacqueline De Camp. Eng. 50 stu. no cr.
Henderson State College, Arkadelphia. Mrs. Fleta Russell. Ed. 150 stu. No. cr.
Hendrix College, Conway. Dr. J. V. West. Psych. 35 stu. no cr.
John Brown University, Siloam Springs. Mrs. I. A. Wills. Lib. Arts. 35 stu. cr.
Ouachita College, Arkadelphia. Virginia R. Smith. Ed. 126 stu. no cr.
Southern State College, Magnolia. W. O. Ober. Eng. 72 stu. cr.

CALIFORNIA

California Institute of Technology, Pasadena. Dr. J. R. Weir. Humanities. 60 stu. no cr.
California State Polytechnic College, San Luis Obispo. Dr. J. W. Tarwater. Ed. and Psych. 110 stu. no cr.
Chaffey College, Ontario. C. J. Booth. Psych. 100 stu. cr.
Chico State College, Chico. Bernard Belden. Ed. and Psych. 35 stu. no cr.
College of the Sequoias, Visulia. J. D. Otto. Eng. 40 stu. 3 cr.
Compton College, Compton. Mrs. Ruth Lewis. Eng. 63 stu. cr.
East Contra Costa Junior College, Concord. Mrs. E. S. Johnson. Communication. 240 stu. cr.
El Camino College, El Camino. George Gerbner. Eng. 160 stu. cr.
Fresno State College, Fresno. Helen Schafer and Phyllis W. Watts. Eng. 170 stu. cr.
Golden Gate College, San Francisco. A. G. Stoll. Gen. Studies. 150 stu. 2 cr.
Long Beach City College, Long Beach. R. R. Johnston and M. H. Hubbell. Lib. Arts and Bus. and Tech. Div. 389 stu. cr.
Los Angeles City College, Los Angeles. Dr. W. C. Varnum. Psych. 180 stu. cr.
Los Angeles Harbor Junior College, Wilmington. D. L. Garner, Humanities Div. Eng. Sec. 40 stu. cr. P

Los Angeles State College, Los Angeles. D. G. Schubert. Ed. 100 stu. cr.
Modesto Junior College, Modesto. J. K. Rowland, Lang. Arts. 60 stu. cr.
Monterey Peninsula College, Monterey. M. R. Todlock Guid. Dept. 15 stu. cr.
Mount San Antonio Junior College, Pomona. Dr. P. J. Canavan Eng. 63 stu. cr.
Napa College, Napa. Mrs. Ruth Pritchard. Eng. 32 stu. cr.
Orange Coast College, Costa Mesa. Louise Dowlen. Eng. 94 [illegible]. cr.
Pacific Union College, Angwin. Alice Babcock. Eng. 20 stu. no cr.
Pasadena City College, Pasadena. Mrs. Elizabeth Herrell. Eng. 180 stu. cr.
Peppendina College, Los Angeles. Neil Matheson. Ed. 42 stud. No cr.
Riverside College, Riverside. R. H. Bradshaw. Eng. 75 stu. cr.
San Bernardino Valley College, San Bernardino. Bernard Muffley. Psych. 45 stu. cr.
San Diego State College, San Diego. C. F. Shouse. Eng. 200 stu. no cr.
San Francisco State College, San Francisco. Mrs. Bernice Biggs. Lang. Arts. 263 stu. cr.
State College, San Jose. Mrs. Mary Goff. Psych. 145 stu. cr.
Santa Ana College, Santa Ana. Lota Blythe. Eng. 20 stu. cr.
Santa Rosa Junior College, Santa Rosa. Lawrence Carrillo. Eng. 50 stu. cr.
Stanford University, Stanford. H. A. Bamman. Counseling and Testing. 430 stu. No cr.
University of California, Berkeley. Doris Gilbert. Univ. Ext. 450 stu. No. cr.
University of California at Los Angeles. James Anderson. Ext. Div. 150 stu. No cr.
Ventura College, Ventura. Mr. P. Altpeter. Eng. 360 stu. cr.
West Contra Costa College, Richmond. J. C. Bellenger. Eng. 70 stu. cr.

COLORADO

Colorado A&M College, Fort Collins. Fern Hintz. Eng. 150 stu. cr.
Colorado Woman's College, Denver. Shirley Newman. Eng. 45 stu. No cr.
Mesa College, Grand Juncton. Mrs. J. Heidrich. Eng. 115 stu. No cr.
University of Colorado, Boulder. Dr. R. D. Thornton. Exten. 250 stu. No cr.
University of Denver, Denver. G. T. Vardaman. Community College. 1,050 stu. No cr.

CONNECTICUT

Teachers College of Connecticut, New Britain. F. R. Lidquist. Ed. 102 stu. cr.
University of Bridgeport, Bridgeport. Gladys L. Persons. Ed. 100 stu. cr. for some students.

DELAWARE

University of Delaware, Newark. Dr. R. G. Stauffer. Ed. 57 stu. No cr.

DISTRICT OF COLUMBIA

American University, Washington. Miss Eva Mahoney. Psych. 51 stu. cr.

FLORIDA

Florida Southern College, Lakeland. Dr. C. A. Woodbury, Jr. Psych. 51 stu. No cr.
Stetson University, DeLand. H. C. Merriam. Ed. 80 stu. No. cr.

University of Miami, Carol Gables. L. R. Wheeler. Arts and Sciences. 800 stu. No cr.
University of Tampa, Tampa. W. D. Glenn. Psych. 46 stu. cr.

GEORGIA

Abraham Baldwin Agricultural College, Tifton. R. E. Kickliter. Eng. 150 stu. cr.
Bessie Tift College, Forsyth. Dr. B. W. Griffith. Eng. 20 stu. No cr.
Georgia Institute of Technology, Atlanta. T. F. Almon. 50 stu. No cr.
Georgia State College for Women, Milledgeville. Rosa Lee Walston. Eng. 30 stu. No cr.
Mercer University, Macon. Miss Leone Bates. Ed. 90 stu. No cr.
University of Georgia, Athens. Dr. Emiliza Swain. Psych. 105 stu. No cr.

INDIANA

Ball State Teachers College, Muncie. George Manolakes. Ed. 120 stu. No cr.
Evansville College, Evansville. G. R. Stien. Spec. Ser. 179 stu. cr.
Goshen College, Goshen. J. J. Fisher, Jr. Eng. 180 stu. cr.
Indiana State Teachers College, Terre Haute. K. N. Orr. Spec. Ed. Clinic. 120 stu. No cr.
Indiana University, Bloomington. Mabel Culmer. Ed. 800 stu. cr.
Manchester College, North Manchester. Esther Ashley. Eng. 47 stu. No cr.
Purdue University, Lafayette. D. Russell Cooper. Eng. 1245 stu. cr.
St. Joseph' College, Collegeville. Rev. Ernest A. J. Lucas, C.PP.S. Ed. 235 stu. No cr.
University of Notre Dame, Notre Dame. R. D. Willemin. Ed. 400 stu. No cr.

ILLINOIS

Eastern Illinois State College, Charleston. Dr. D. L. Moler. Ed. 123 stu. No cr.
Illinois State Normal University, Normal. Wallace Ramsey. Ed. 80 stu. No cr.
Joliet Junior College, Joliet. B. F. Day. Eng. 22 stu. cr.
Knox College, Galesburg. R. S. Harper. Psych. 24 stu. No cr.
Loyola University, Chicago. Joseph Devane. Ed. 65 stu. cr.
MacMurray College, Jacksonville. W. S. Dysinger. Personnel. 100 stu. No cr.
North Central College, Naperville. D. E. Latham. Psych. 45 stu. No cr.
Northern Illinois State Teachers College, DeKalb. Dr. E. B. Grant. Ed. 75 stu. No cr.
Principia College, Elsah. Dr. E. S. Lenar, Jr. Eng. 20 stu. cr.
Quincy College, Quincy. P. L. Hug, O.F.M. Psych. 23 stu. cr.
Rosary College, River Forest. Sister Mary Brian. Eng. 105 stu. cr.
University of Chicago, Chicago. Mrs. Leone Burfield. Eng. 150 stu. cr.
Univesity of Illinois, Urbana. B. B. Jackson. Stu Coun Bureau. 365 stu. No cr.
Wheaton College, Wheaton. Carol J. Davis. Ed. 40 stu. No cr.

IOWA

Drake University, Des Moines. D. F. Parry. Stu. Personnel. 225 stu. No cr.
Graceland College, Lamoni. W. S. Gould. Comm. 90 stu. No cr.
Grinnell College, Grinnell. Velma Hiser and Dr. George Lovell. Sp. and Psych. 23 stu. cr.
Iowa State College, Ames. Alice Thomas. Psych. 150 stu. No cr.
Iowa State Teachers College, Cedar Falls. Margaret M. Buswell. Ed. 40 stu. No cr.

University of Iowa, Iowa City. William Eller. Comm. 225 stu. No cr.

KANSAS

Bethany College, Lindsburg. M. J. Dumler. Eng. (Started Fall '54). No cr.

Fort Hays Kansas State College, Hays. Mabel Lacy. Eng. 80 stu. cr.

Kansas State College, Manhattan. Dr. M. D. Woolf. Eng. 117 stu. No cr.

Kansas State Teachers College, Emporia. H. J. Waters. Ed. 24 stu. No cr.

Kansas University, Lawrence. H. P. Smith. Ed. 400 stu. No cr.

St. John's College, Winfield. O. L. Brenner. Eng. 58 stu. No cr.

Wichita University, Wichita. Evelyn Hinton. Ed. 60 stu. No cr.

KENTUCKY

Asbury College, Welmore. C. B. Hamann. Science. 54 stu. No cr.

Kentucky Wesleyan College, Owensboro. Dr. J. H. Penrod. Comm. 122 stu. cr.

LOUISIANA

Louisiana State University, Baton Rouge. Dr. T. W. McElwee. Bureau of Test., Guid., and Remedial Reading. 400 stu. No cr.

Southeastern Louisiana College, Hammond. Dr. L. A. Duggins. Spec. Ed. 17 stu. No cr.

Tulane University, New Orleans. Mrs. Helene Mann. Reading. 150 stu. No cr.

MARYLAND

Western Maryland College, Westminster. Dr. Sara E. Smith. Reading. 25 stu. cr.

MASSACHUSETTS

American International College, Springfield. C. A. Wells, Psych. 22 stu. No cr.

Boston University, Boston. Olive S. Niles. Counseling. 50 stu. No cr.

Gordon College, Boston. Goldie M. Stocker. Ed. 19 stu. No cr.

Northeastern University, Boston. W. S. Bronson. Psych. 100 stu. No cr.

Smith College, Northampton. Mary Stephenson. Ed. 175 stu. No cr.

Suffolk University, Boston. Dr. H. W. Copp. Ed. 186 stu. 3 hrs. cr.

Worcester Junior College, Worcester. M. M. Koingsburg. Lib. Arts. 125 stu. 1 hr. cr.

MICHIGAN

Albion College, Albion. Mrs. Elsie Silkworth. Eng. 50 stu. cr.

Aquinas College, Grand Rapids. Sister M. Bernetta, O. P. Elem. Ed. 28 stu. No cr.

General Motors Institute, Flint. Dan Jones. Psych. 90 stu. No cr.

Hope College, Holland. Mrs. Helen Schoon. Dean of Col. 70 stu. No cr.

Michigan College of Mining and Technology, Houghton. G. B. Gerhard. Lang. 45 stu. No cr.

Michigan State College, East Lansing. B. H. Van Roekel. Basic Col. Impr. Ser. 800 stu. No cr.

Michigan State Normal College, Yypsilanti. Kathleen Hester. Ed. 15 stu. No cr.

Northern Michigan College of Education, Marquette. Clare Walker. Ed. & Psych. 23 stu. No cr.

Roosevelt University, Chicago. R. S. Gill. Eng. 83 stu. No cr.

University of Detroit, Detroit. Dr. L. D. Rachiele. Psych. 120 stu. No cr.

University of Michigan, Ann Arbor. Dr. Donald E. P. Smith. Psych. Ser. 450 stu. No cr.

Wayne University, Detroit. Roger S. Popper. Stu. Personnel. 400 stu. No cr.

Western Michigan College, Kalamazoo. Dorothy J. McGinnis. Ed. &

Psych. 135 stu. No cr.

MINNESOTA

Augsburg College, Minneapolis. K. B. Dahlen. Eng. 12 stu. No cr.

Carleton College, Northfield. Miss Jane Andrews. Test. Ser. 100 stu. No cr.

College of Saint Teresa, Winona. Sister M. Theophane, A.M. Eng. 21 stu. No cr.

Concordia College, Moorhead. Miss Dorothy Johnson. Ed. & Psych. 27 stu. No cr.

St. Mary's College, Winona. Brother Leonard, F.S.C. Psych. 48 stu. No cr.

St. Olaf College, Northfield. Evelyn M. Jerdee. Psych. 80 stu. No cr.

State Teachers College, Mankato. G. M. Cansler. Ed. 60 stu. cr.

Teachers College, St. Cloud. Lucille S. Maier. Ed. 60 stu. No cr.

MISSISSIPPI

Mississippi Southern College, Hattiesburg. Dr. R. C. Staiger. Ed. & Psych. 100 stu. cr.

University of Mississippi, University. Charles F. Elton. Psych. 175 stu. cr.

MISSOURI

College of Saint Teresa, Kansas City. Sister M. Berenice, C.S.J. Ed. Not offered in 53-54. No cr.

Missouri Valley College, Marshall. D. P. Ogdon. Psych. 17 stu. No cr.

Northwest Missouri State College, Maryville. Dora B. Smith. Ed. 107 stu. No cr.

Park College, Parkville. Mrs. Elizabeth Campbell. Eng. 33 stu. 2 hrs. cr.

Southwest Baptist College, Bolivar. Leona Tucker. Ed. 50 stu. No cr.

State College, Springfield. Rosemary Williams. Ed. 35 stu. cr.

Stephens College, Columbia. Mrs. Bonnie Stewart. Comm. 200 stu. cr.

William Jewell College, Liberty. Dr. Harvey Thomas. Psych. 40 stu. No cr.

NEBRASKA

University of Nebraska, Lincoln. W. A. Poe. Couns. Ser. 275 stu. No cr.

University of Omaha, Omaha. S. E. Davis. Ed. 235 stu. cr.

NEW HAMPSHIRE

Dartmouth College, Hanover. R. M. Bear. Stu. Couns. 241 stu. No cr.

NEW JERSEY

Fairleigh Dickinson College, Rutherford. Olive Carter. Gen. Studies. 110 stu. No cr. or 3 hrs. cr.

Glassboro State Teachers College, Glassboro. Dr. Marion Little. Ed. 35 stu. No cr.

New Jersey State Teachers College, Upper Montclair. Dr. W. R. Phipps. Ed. 11 stu. No cr.

Rutgers University, New Brunswick. Anna J. Starr. Reading. 50 stu. No cr.

State Teachers College, Patterson. R. W. Miller. Comm. Arts. 24 stu. No cr.

Upsala College, East Orange. Dr. H. S. Carlson. Fresh. Orient. 300 stu. No cr.

NEW MEXICO

New Mexico College of Agriculture and Mechanic Arts, State College. Clarence Hope. Ed. 105 stu. cr.

New Mexico Military Institute, Roswell. Capt. G. E. Mutch, III. Reading. 30 stu. cr.

University of New Mexico, Albuquerque. G. E. Chienitz. Community Col. 23 stu. No cr.

NEW YORK

Brooklyn College, Brooklyn. Phillip Shaw. Couns. 300 stu. No cr.
Colgate University, Hamilton. G. C. Rogers, Jr. Preceptorial Studies. 75 stu. No cr.
Columbia University, New York. Ruth Strang & Dr. Algard Whitney. Ed. 110 stu. cr.
New York University, New York. Dr. Nila Smith. Ed. 125 stu. No cr.
Pace College, New York. John Waldman. Eng. (Scheduled for 1955). No cr.
Queens College, New York. Bernard Leibman. Gen. Studies. 20 stu. No cr.
Rensselaer Polytechnic Institute, Troy. R. A. Sencer. Eng. 75 stu. No cr.
St. Lawrence University, Canton. Mrs. Jean Killeourne. Ed. 30 stu. cr.
Skidmore College, Saratoga Springs. Robert Anderson. Psych. (Not offered in 53-54). No cr.
State College for Teachers, Albany. J. R. Newton. Ed. 40 stu. No cr.
State Teachers College, Cortland. Dr. V. A. Burd. Eng. 50 stu. No cr.
State University Teachers College, Oneonta. Dr. R. W. Ronnas. Eng. (Service to individuals) No cr.
Syracuse University, Syracuse. Jean Marie Joly. Ed. 500 stu. cr.
University of Buffalo, Buffalo. Gloria K. Ortner. Dean of Stu. 110 stu. No cr.
University of Rochester, Rochester. J. W. Cole. Dean of Instruct. & Stu. Ser. 40 stu. No cr.

NORTH CAROLINA

Agricultural and Technical College, Greensboro. Arthur F. Jackson. Eng. 32 stu. cr.
Appalachian State Teachers College, Boone. W. G. Cutts, Jr. 60 stu. No cr.
Asheville-Biltmore College, Asheville. J. A. Owen. Psych. Ser. 22 stu. No cr.
Atlantic Christian College, Wilson. Mrs. Dorothy Eagles. Eng. 40 stu. No cr.
Duke University, Durham. Dr. Mabel Rudisill. Ed. 90 stu. cr.
Lenoir Rhyne College, Hickory. Miss Hattie Fowler. Ed. 24 stu. No cr.
University of North Carolina, Chapel Hill. Mrs. D. W. Campbell. Univ. Test. SeSr. 151 stu. No cr.

NORTH DAKOTA

State Teachers College, Minot. Lyla Hoffine. Lang. 400 stu. cr.
University of North Dakota, Grand Forks. Dr. Selma Herr. Ed. & Psych. No cr.

OHIO

Antioch College, Yellow Springs. Erling W. Eng. Psych. 60 stu. cr.
Baldwin-Wallace College, Berea. J. E. Brewer. Ed. 86 stu. cr.
Bowling Green State University, Bowling Green. Dr. Martha Gesling. Ed. cr.
Case Institute of Technology, Cleveland. Harold Johnson. Humanities. 185 stu. cr.
College of Wooster, Wooster. W. L. Sharp. Psych. 550 stu. No cr.
Finn College, Cleveland. J. C. Matthews. Guid. 535 stu. cr.
John Carroll University, University Heights. Dr. W. S. Nosal. Vocat. Guid. Ser. 40 stu. No cr.
Miami University, Oxford. C. B. Huelsman, Jr. Ed. 105 stu. No cr.
Oberlin College, Oberlin. H. E. Weaver. Psych. 41 stu. No cr.
Ohio University, Athens. Dr. D. F. Blockwood. Psych. 400 stu. cr.
Ohio Wesleyan University, Delaware. Mrs. Alma Sheridan. Ed. 187 stu. cr.

University of Akron, Akron. Neal Balanoff. Community Col. 35 stu. No cr.
University of Cincinnati, Cincinnati. W. R. Hill. Reading. 225 stu. No cr.
University of Toledo, Toledo. Dr. Harold Dial. Eve. Col. 90 stu. No cr.
Western Reserve University, Cleveland. Dr. Mary Austin. Psych. Res. Ser. 185 stu. No cr.
Wittenburg College, Springfield. J. N. Stauffer & J. E. Slaymaker. Ed. 30 stu. No cr.
Youngstown College, Youngstown. Mary Ann Dobrich. Eng. 71 stu.

OKLAHOMA

Central Christian College, Bartlesville. Myrtle Higgins. Orient. 93 stu. cr.
Connors State Agricultural College, Warner. Fred Hager. Guid. & Couns. 16 stu. cr.
Northeastern State College, Tahlequah. E. A. Jones. Separate Service. 85 stu. No cr.
Oklahoma A&M College, Stillwater. Dr. R. C. Sommerfeld. Ed. 245 stu. No cr.
Oklahoma College for Women, Chickasha. L. E. Harris. Social Fund. 52 stu. cr.
Phillips University, Enid. Lola Montgomery. Psych. & Person. 60 stu. No cr.
Southeastern State College, Durant. C. B. Trammell. Ed. 239 stu. cr.
Southwestern State College, Weatherford. Merle W. Vance. Ed. 18 stu. cr.
University of Oklahoma, Norman. William Eller. Ed. 420 stu. No cr.
University of Tulsa, Tulsa. Miss Loris DeFigh. Reading. 50 stu. No cr.

OREGON

Oregon College of Education, Monmouth. Emma Henkle. Ed. 30 stu. No cr.
Oregon State College, Corvalis. M. J. Ludwig. Eng. 665 stu. cr.
University of Oregon, Eugene. P. A. Killgallon. Couns. Ser. 100 stu. No cr.
University of Portlan, Portland. F. S. **Douglaas.**

PENNSYLVANIA

Allegheny College, Meadville. Dr. Elizabeth Stadlander. Ed. cr.
Beaver College, Jenkintown. A. W. Fisher. Psych. 28 stu. No cr.
Bucknell University, Lewisburg. W. H. Kieft. Test. & Couns. Ser. 94 stu. No cr.
College Misericordia, Dallas. Sister Mary Christopher, R.S.M. Ed. 40 stu. cr.
Franklin and Marshall College, Lancaster. Mrs. Dorothy LeFeure. Ed. 60 stu. No cr.
Gannon College, Eric. C. R. Colvin. Eng. 97 stu. No cr.
Gettysburg College, Gettysburg. W. O. Duck. Guid. 60 stu. No cr.
Indiana State Teachers College, Indiana. Dr. S. W. Lore. Ed. 125 stu. No cr.
Lafayette College, Easton. Mrs. H. E. Ketcham. Reading. 129 stu. No cr.
Lebanon Valley College, Annville. Gertrude Turner. Eng. 15 stu. No cr.
Lehigh University, Bethlehem. Mrs. A. W. Berry, Jr. Reading. 230 stu. No cr.
Millersville State Teachers College, Millersville. Joseph Torchia. Ed. 60 stu. No cr.
Pennsylvania State University, State College. G. E. Murphy. Ed. 254 stu. No cr.

State Teachers College, Westchester. Dr. C. W. Patterson. Ed. 40 stu. No cr.

Temple University, Philadelphia. T. J. Edwards. Psych. 90 stu. No cr.

Westminster College, New Wilmington. Dr. Amy Charles. Eng. 550 stu. No cr.

SOUTH CAROLINA

Bob Jones University, Greenville. L. R. Schoen. Ed. 100 stu. No cr.

TENNESSEE

Bryan University, Dayton. D. W. Ryther. Eng. 17 stu. cr.

David Lipscomb College, Nashville. J. H. McBroom, Jr. Stu. Guid.

East Tennessee State College, Johnson City. Mrs. Allie Lou Felton Gilbreath. Eng. 216 stu. No cr.

Ser. 50 stu. No cr.

Union University, Jackson. Dr. Dixie Jenes. Ed. & Psych. 20 stu. No cr.

University of Tennessee, Knoxville. E. J. Fisher. Psych. 20 stu. No cr.

TEXAS

Abilene Christian College, Abilene. G. C. Morlan. Ed. 175 stu. cr.

Amarillo College, Amarillo. Gale Crownover. Psych. & Eng. 15 stu. cr.

Baylor University, Waco W. E. Hercher. Psych. 80 stu. No cr.

East Texas State College, Commerce. J. M. Lacy. Eng. 102 stu. cr.

Incarnate Word College, San Antonio. Sister Aloysius Clare. Ed. 65 stu. No cr.

Lee College, Baytown. Dr. C. J. Mullins. Ed. 125 stu. 3 hrs. cr.

McMurry College, Abilene. L. D. Huff. Eng. 50 stu. cr.

North Texas State College, Denton. G. C. Beamer. Ed. 80 stu. No cr.

Our Lady of the Lake College, San Antonio. Mother M. Angelica. Eng. 16 stu. cr.

Pan American College, Edinburg. L. D. Gilmore. Ed. 73 stu. 1 hrs. cr.

San Antonio College, San Antonio. Mr. F. E. Maples. Ed. 14 stu. No cr.

Schreiner Institute, Kerrville. R. A. Brewster. No dept. 48 stu. cr.

South Texas Junior College, Houston. J. H. Anthony. Psych. 15 stu. No cr.

Southern Methodist University, Dallas. Dorothy Kendall Bracken. Ed. 40 stu. No cr.

Southwest Texas State Teachers College, San Marcos. Miss Carrie Shepherd. Personnel Div. 197 stu. cr.

Stephen F. Austin State College, Nacogdoches. A. L. Lang. Ed. 30 stu. cr.

Sul Ross State College, Alpine. F. A. Briggs. Eng. 75 stu. cr.

Texas State College of Arts and Industries, Kingsville. R. E. Richards. Stu. Per. Ser. 14 stu. No cr.

Texas Agricultural and Mechanical College, College Station. Dr. A. J. Kingston. Basic Div. 600 stu. cr.

Texas Christian University, Fort Worth. O. S. Causey. Ed. 260 stu. 3 hrs. cr.

University of Houston, Houston. A. J. Pellettieri. Psych. 500 stu. Terminal credit.

University of Texas, Austin. Dr. Elsie Dotson. Test. & Guid. Bureau. cr.

Wayland College, Plainview. Mrs. J. L. Harden. Eng. 20 stu. cr.

West Texas State College, Canyon. Ruth Lowes. Ed. 8 stu. cr.

Wharton County Junior College, Wharton. Mrs. W. E. Manning. Ed. 28 stu. cr.

UTAH

University of Utah, Salt Lake City. Mrs. Mabel S. Noall. Speech. 546 stu. cr.

Weber College, Ogden. J. G. Kelly. Eng. 110 stu. cr.

VIRGINIA

Lynchburg College, Lynchburg. Mrs. R. C. Scott. Eng. 60 stu. cr.

Madison College, Harrisonberg. Katherine Anthony. Ed. 75 stu. cr.

University of Virginia, Charlottesville. Dr. U. W. Leavell. Ed. 30 stu. No cr.
Washington and Lee University, Lexington. W. M. Hinton. Psych. 65 stu. No cr.
William and Mary College, Williamsburg. J. S. Sturgell. Couns. Office. 25 stu. No cr.

VERMONT

University of Vermont, Burlington. Dr. Lois Otterman. Stu. Person. No cr.

WASHINGTON

Clarke College, Vancouver. C. R. Schmitkin. Eng. 36 stu. cr.
Gonzaga University, Spokane. L. F. Egeck. Ed. 25 stu. cr.
Pacific Luthern College, Parkland. L. O. Eklund. Test. Ser. No cr.
Walla Walla College, College Place. Miss Frances B. Stoddard. Non-dept 39 stu. cr.
Whitman College, Walla Walla. Dr. P. J. Jackson. Eng. 20 stu. cr.
Whitworth College, Spokane. Miss Mate Whitten. Eng. 90 stu. cr.

WEST VIRGINIA

University of West Virginia, Morgantown. Mrs. L. H. Leonian, Eng. 65 stu. No. cr.

WISCONSIN

Marquette University, Milwaukee. Giles A. Daeger. Eng. 76 stu. No cr.
Milwaukee School of Engineering, Milwaukee. E. F. Symonik. Eng. 80 stu. No cr.
Ripon College, Ripon. P. J. Aldus. Eng. 60 stu. cr.
Wisconsin State College, Platteville. Dr. R. K. Woods. Ed. 25 stu. cr.

WYOMING

Casper Junior College, Casper. W. M. Brown. Eng. 100 stu. cr.
University of Wyoming, Laramie. L. L. Miller. Personnel and Guid. 110 stu. cr.

COLLEGE AND UNIVERSITY REPRESENTATIVES IN ATTENDANCE AT ANNUAL MEETING

ALABAMA

- Driggs, Don F.,
  - Alabama Polytechnic Institute, Auburn

ARKANSAS

- Cantrell, Mrs. Dorothy
  - Arkansas State Teachers College, Conway
- De Camp, Jacqueline
  - Arkansas State Teachers College, Conway
- Fiehler, Rudolph
  - Southern State College, Magnolia
- Hartley, Leslie S.
  - College of the Ozarks, Clarksville
- Jordan, Ben W.
  - Arkansas College, Batesville
- McAllister, David
  - Arkansas Polytechnic College, Russellville
- Moore, Kathryn
  - Arkansas A&M College, College Heights
- Rankin, Oren R.
  - Arkansas Tech., Russellville
- Russell, Mrs. Fleta
  - Henderson State Teachers College, Arkadelphia
- Sherbourne, Julia Florence
  - University of Arkansas, Fayetteville
- Smith, Virginia
  - Ouachita Baptist College, Arkadelphia
- West, Dr. Joe V.
  - Hendrix College, Conway
- Willis, John, Jr.
  - Arkansas A&M College, Monticello
- Wills, Mrs. Irvin A.
  - John Brown University, Siloam Springs

COLORADO

- Budig, Yvonne
  - Opportunity School, Denver
- Domer, Naomi R.

Opportunity School, Denver

DISTRICT OF COLUMBIA

Fulker, Edmund N.
USAF, Washington
Goodwin, Capt. Norman E.
USAF, Washington
Sowell, R. Lawrence
Fort McNair, Washington

FLORIDA

Berg, Paul C.
University of Florida, Gainesville
Spache, George D.
University of Florida, Gainesville

KANSAS

Bloomer, Richard H.
University of Wichita, Wichita
Brenner, O. L.
St. John's College, Winfield
Hinton, Evelyn
University of Wichita, Wichita
Smith, Henry P.
University of Kansas, Lawrence

LOUISIANA

Hatcher, Mrs Amelia D.
Louisiana State University, Baton Rouge
McElwee, Tandy W.

MARYLAND

Martell, Barbara
54 Glenwood Road, Bethesda
Stolarski, Beverly B.
2720 74th Avenue, Hyattsville

MISSISSIPPI

Hogan, Patrick G., Jr.
Delta State Teachers College, Cleveland
Staiger, Ralph
Mississippi Southern College, Hattiesburg

MISSOURI

Thomas, Dr. Harvey
William Jewell College, Liberty

Louisiana State University, Baton Rouge

Miller, Annie Laurie
Louisiana State University, Baton Rouge

Speairs, Richard K.
Centenary College, Shreveport

NEW MEXICO

Mutch, Capt. George E.
New Mexico Military Institute, Roswell

OKLAHOMA

De Figh, Loris
University of Tulsa, Tulsa

Denney, Earl C.
P. O. Box 131, Tulsa

Harris, Louie E.
Oklahoma College for Women, Chickasha

Heilman, Arthur
Oklahoma University, Norman

Marsden, W. Ware
Oklahoma A&M College, Stillwater

Sommerfeld, Roy E.
Oklahoma A&M College, Stillwater

Stephens, Ted W.
Oklahoma A&M College, Stillwater

TENNESSEE

Martin, James A.
Middle Tennessee State College, Murfreesboro

TEXAS

Anderson, Maud
Highland Park High School, Dallas

Andrews, Wade
Tarleton State College, Stephenville

Barnett, Weldon H.
Abilene Christian College, Abilene

Beamer, George C.
North Texas State College, Denton

Bliesmer, Emery P.
University of Texas, Austin

Brashears, Evelyn
Mary Hardin Baylor, Belton

Briggs, F. Allen
Sul Ross State College, Alpine

Carlyan, Ann Kerr
Southern Methodist University, Dallas

Carroll, Hazel H.
Southern Methodist University, Dallas

Craig, Mary C.
Texas Wesleyan College, Fort Worth

De Coligny, Mrs. Marion
Texas State College for Women, Denton

Denton, A. E., Jr.
Texas A&M, College Station

Dodd, E. C.
Erath County Schools, Stephenville

Dotson, Elsie J.
University of Texas, Austin

Ewing, J. Ralph, O. D.
3719 Camp Bowie Blvd., Fort Worth

Franklin, J. E.
East Texas State College, Commerce

Hunt, Dave
Humble Oil and Refining Company, Houston

Karraker, Dr. Mary
Crippled Children's Society, Fort Worth

Karraker, W. J.
Texas Wesleyan Colege, Fort Worth

Kingston, Albert J.
Texas A&M College, College Station

McCanne, Hazel
Southwest Texas State Teachers College, San Marcos

Monahan, Frank
Lackland Air Force Base, San Antonio

Morlan, G. G.
Abilene Christian College, Abilene

Pellettieri, A. J.
University of Houston, Houston

Rollins, W. J.
Highland Park High School, Dallas

- Rushing, Joe B.
  - Howard Payne College, Brownwood
- Shepherd, Carrie
  - Southwest State Teachers College, San Marcos
- Tromel, Agnes C.
  - Texas State College for Women, Denton
- White, Dr. Leonard R.
  - 2365 North Main, Fort Worth
- Williams, C. C.
  - North Texas State College, Denton

UTAH

- Noall, Mrs. Mabel S.
  - University of Utah, Salt Lake City

WYOMING

- Brown, Waren M.
  - Casper Junior College, Casper

OTHER REPRESENTATIVES

MISSOURI

- Stoyanoff, Louis J.
  - Rapid Reading Institute, St. Louis
- Teel, Ken
  - Rapid Reading Institute, St. Louis

TEXAS

- Anderson, V. L.
  - D. C. Heath and Company, Dallas
- Brown, John W.
  - Science Research Associates, Austin
- Christopher, Chris
  - D. C. Heath and Company, Dallas
  - California Testing Bureau, Dallas
- Robinson, W. J.